

An Archaeological Curation-Needs Assessment for the Bureau of Indian Affairs



Archaeological Curation-Needs Assessment
Technical Report No. 16

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by

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Mandatory Center of Expertise for the
Curation and Management of Archaeological Collections

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Executive Summary

Problem

Federal archaeological collections are a significant, nonrenewable national cultural resource. However, curation of these materials has been largely substandard or ignored for more than 50 years. The result has been the steady deterioration of these resources, which include many unique prehistoric and historical-period objects. A significant number of these irreplaceable collections have been abandoned in the attics, basements, and storage closets of storage facilities across the United States. The improper care and subsequent deterioration of these collections violate the laws that governed their recovery and educational and scientific use of the materials. Additionally, many objects were illegally transported to Europe, where they remain today. Unfortunately, many valuable collections related to North American prehistory and history have been lost, and the considerable financial investment of the public in archaeological recovery wasted. However, a substantial portion of these national, cultural treasures still exists. If given proper housing and care, these nonrenewable resources can be saved for future generations.

Background

The Bureau of Indian Affairs (BIA) is responsible for the management of archaeological and historical resources recovered prior to October 31, 1979, from reservations under its administration or recovered since that time and relinquished to the BIA by Indian landowners. As mandated by federal law, agencies are required to ensure that all recovered archaeological materials and their associated records are adequately curated in perpetuity. Unfortunately, funding shortfalls, lack of consistent national policy, and the magnitude of the problem have prevented compliance.

Collections recovered from BIA reservations are public property, the result of many years of archaeological research and the expenditure of a considerable amount of federal dollars. For those archaeological collections recovered prior to October 31, 1979, from reservation trust lands, the primary permit-granting agency was the National Park Service (NPS), under the authority of the Antiquities Act of 1906. The

BIA, as the landholding agency, is responsible for the perpetual care of those resources. Through the years, most collections have been stored free of charge by universities, museums, and archaeological contractors. Inadequate funding and failing repositories now seriously hinder these institutions' ability to adequately care for archaeological collections and associated records.

In the spring of 1994, Ms. Marian Kaulaity Hansson, curator, BIA Museum Property, and Donald R. Sutherland, BIA, Washington, D.C., requested the services of the U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (St. Louis District) to find and inspect all archaeological collections under the jurisdiction of the Billings and Portland Area Offices in the states of Idaho, Montana, Oregon, Washington, and Wyoming. Funding for the research project came from BIA Museum Property. Prefieldwork began in Summer 1994, limited fieldwork began in Fall 1994, and repository-site visits were conducted between June and August 1995 and in December 1995.

Project Scope

The curation-needs assessment agreed upon in the memorandum of understanding between the St. Louis District and the BIA established that the scope of the project included a well-defined number of Indian reservations and a clear set of restrictions for the agency's responsibility to the collections. The project included reservations located in Idaho, Montana, Oregon, and Washington, as listed below.

Idaho

- Coeur d'Alene
- Duck Valley
- Fort Hall
- Kootenai
- Nez Perce

Montana

- Blackfeet
- Crow
- Flathead
- Fort Belknap
- Fort Peck
- Northern Cheyenne
- Rocky Boy's

Oregon

- Burns Paiute
- Coos, Lower Umpqua, Suislaw
- Cow Creek

- Fort McDermitt
- Grand Ronde
- Siletz
- Warm Springs
- Umatilla

Washington

- Chehalis
- Colville
- Hoh
- Jamestown s'Klallam
- Kalispel
- Lower Elwha
- Lummi
- Makah
- Muckleshoot
- Nisqually
- Nooksack
- Port Gamble
- Port Madison
- Puyallup
- Quileute
- Quinault
- Sauk-Suiattle
- Shoalwater Bay
- Skokomish
- Spokane
- Squaxin Island
- Stillaguamish
- Swinomish
- Tulalip
- Upper Skagit
- Yakima

Wyoming

- Wind River

Idaho's Duck Valley, Fort Hall, and Nez Perce Reservations; Montana's Blackfeet and Crow Reservations; Oregon's Warm Springs Reservation; and Washington's Colville, Makah, Spokane, Squaxin Island, Swinomish, Tulalip, and Yakima Reservations have archaeological collections described in this report. Because of political concerns, the Wind River Reservation, Wyoming, in consultation with the Billings Area Office, declined participation in this project. Therefore, archaeological collections recovered from Wind River were neither researched nor assessed by the St. Louis District.

With three exceptions, the project scope divided the Billings and Portland Area Offices along state boundaries. The Duck Valley Reservation lies in Idaho and Nevada, but is administered by the Portland Office. The Flathead Reservation, in Montana, is administered by the Portland Office for historical reasons. The Portland Office also administers the Metlakatla Reservation in southeastern Alaska. However, this reservation was not included in the St. Louis District project.

The BIA does not have responsibility for archaeological collections recovered from Indian reservations after the enactment of the Archaeological Resources Protection Act of 1979 (ARPA). As stated in ARPA, all archaeological collections recovered from Indian reservations after the law's enactment on October 31, 1979, are the responsibility of the Indian tribes, regardless of the repository that curates them (see also 25 CFR Part 262 and 43 CFR Part 7, Protection of Archaeological Resources). If recovered prior to ARPA, archaeological resources recovered from Indian reservations are the responsibility of the BIA, with exceptions as noted below.

Although responsible for archaeological resources recovered from Indian reservations prior to ARPA, the BIA is not responsible for materials collected from private property (either Indian or non-Indian) within the boundaries of a reservation. These resources are the responsibility of the landowner. Additionally, even if archaeological resources were collected prior to ARPA and are derived from Trust lands within the reservation, but are stored in a tribal facility, they are not considered to be the direct responsibility of the BIA; they are considered the responsibility of the tribe that has possession.

The project scope was essentially limited to regional museums and universities that conducted work on reservations prior to the enactment of ARPA or that currently curate BIA collections. No tribal facilities were called or visited during the project. Criteria for collections to be evaluated included (1) recovery from Trust (not private) lands within Indian reservations in Idaho, Montana, Oregon, or Washington, (2) recovery prior to the enactment of ARPA on October 31, 1979, and (3) collections currently curated at nontribal repositories.

The project scope included 46 extant Indian reservations: five in Idaho, seven in Montana, eight in Oregon, and 26 in Washington. As previously mentioned, the Wind River Reservation in Wyoming, although technically within the project area, was not investigated. Of these 46 reservations, 13 were found to possess archaeological collections that fall under the aforementioned criteria. The collections from each reservation are discussed in individual chapters. Indian reservations without collections falling into the aforementioned categories are not included as report chapters. However, a bibliography for these reservations, compiled primarily from site-file searches in each state, is included in the appendix.

Unresolved Project Issues

The Oregon State Museum of Anthropology may be curating a small number of artifacts and/or human skeletal remains recovered on the now-defunct Klamath Indian Reservation in southern Oregon. The Klamath Reservation was effectively dissolved in 1958, but a small portion of the reservation remained in existence until 1974. A search in the Oregon-state site files by St. Louis District personnel failed to reveal any archaeological sites located on the reservation or any reports of work on the reservation that fit the project criteria. However, during a visit to the museum, St. Louis District personnel examined a 1956 report by L. S. Cressman that documents work conducted in the region and on the reservation that describes the artifacts and human skeletal remains collected. Unfortunately, provenance is not well documented in the report and none of the sites have permanent, state site numbers. Staff at the Oregon State Museum of Anthropology feel that some of the Klamath collections may be located at the museum, but a records search is necessary to determine this (cost = \$30/hour; staff need a map of the former reservation's boundaries).

The Smithsonian Institution and the American Museum of Natural History may be curating collections recovered from the Crow Indian Reservation. A site-file search conducted by St. Louis District personnel of the Montana site files indicated that a collection from the 1940s is located at the American Museum of Natural History and that collections from the 1950s and 1960s Yellowtail Dam and Reservoir Project may be located at the Smithsonian Institution. These two institutions were not visited for this project.

The University of Washington operated the Office of Public Archaeology (OPA) for a number of years. The office conducted a large number of projects, but ceased functioning in the late 1980s. Artifacts were subsequently shipped to their owners, to the University of Washington's Thomas Burke Memorial Museum (Burke Museum), and to other institutions; the records are still stored in an OPA office at the University of Washington. Archivists have organized the documents and are maintaining the files. A document list can be checked out. St. Louis District personnel have examined the list, but not the documents. A cursory examination of the list revealed the following documents that appear related to BIA archaeological collections within the scope of the St. Louis District project.

1. Port Gamble Indian Reservation Site (Literature) Search; (Box 7, 1979);
2. Tulalip Indian Site (Literature) Search; (Box 7, 1979-80);
3. Fieldbooks (3), 45SN48 and 45SN49 (Sauk-Suiattle IR); (Box 9, 1980); and

4. Highway Reports No. 4 and No. 6, Excavations at 45SN48 and 45SN49; (Box 17, 1979-81).

Examination of these or other OPA documents requires the permission of Dr. Julie Stein, Burke Museum.

A set of collections were recently transferred from the Burke Museum to the Grant County, Washington, Public Utilities District. These collections included material from a number of sites that are located within the boundaries of the Yakima Indian Reservation (45YK19, 20, 21, 25, 26, 28, 29, 30, 31, and 34). However, the Grant County Public Utilities District has stated that none of the materials is from Indian Trust Lands or is likely from ceded or private lands. Further research is necessary to determine BIA responsibility for these collections, if any.

The initial St. Louis District site file and literature search generated a list of 40 possible repositories for BIA collections. Each repository with collections is described separately in this report. However, staff from Evergreen State College in Olympia, Washington, proved impossible to contact; whether or not collections are located there is unclear. No reports located in the site-file search indicated author affiliation with Evergreen State College, but a number of sites were recorded during 1977–1979 by persons affiliated with the college. These sites include 45CA219 (Makah), 45KP20 (Suquamish), 45MS55 (Skokomish), 45ST162 (Spokane), and 45OK384, 394, 396, 405, and 411 (Colville).

Findings

Status of Physical Facilities

Repository Adequacy

BIA collections examined for this study are currently stored in 12 institutions and one archaeological contracting firm, encompassing 15 storage locations in five states. These storage locations are separated into three distinct facility types. Only two (13%) of the 15 storage locations approach all of the standards mandated by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archeological Collections). Eight (53%) others approach proper levels of environmental controls, pest management, security, and fire-detection and -suppression. Five (33%) do not approach any of these standards. Only seven (54%) of the 13 repositories have full-time staff for the management of archaeological collections.

Repository Maintenance

Nine (60%) of the 15 storage locations that were inspected are regularly maintained. Five (33%) receive maintenance on an as-needed basis. Four (27%) storage locations regularly maintain and clean collections storage areas. Nine (60%) storage locations maintain and clean collections storage areas on an as-needed basis. Collections are often ignored, resulting in deterioration of the collections. In addition, eight (53%) of the 15 storage locations store extraneous items such as field equipment, hazardous chemicals, and personal items in collections storage areas, which is an unacceptable practice in professional collections-management repositories.

Environmental Controls

Environmental monitoring and adequate environmental control—appropriate, stable temperatures and humidity, and adequate monitoring of both—are crucial for the long-term preservation of archaeological collections. Five (33%) of the 15 storage locations examined are equipped with HVAC systems that monitor and control for both temperature and humidity. Two storage locations are equipped with HVAC systems that do not monitor or control humidity. Five (33%) of the storage locations have environmental controls (HVAC or air-conditioning and heating, and humidity monitoring and control) that meet federal standards. Although 14 (93%) storage locations have heating, eight (53%) are not air-conditioned. Nine (60%) monitor humidity, but only five (33%) continually control humidity.

Security

Eight (53%) storage locations meet federal standards for the security of archaeological collections. All of the storage locations are secured with key and/or dead bolt locks, most provide for limited access, and those with windows have simple window locks. However, intrusion alarms, the presence of which is a primary requirement, were not present. Although there were no documented cases of unauthorized entry leading to the loss of BIA collections, the potential for unauthorized access exists at several of the storage locations examined.

Fire Detection and Suppression

Fire is a major hazard to any museum collection. Although 13 (87%) storage locations provide adequate to superb fire detection, only 7 (47%) of these have both sufficient fire-detection and -suppression systems. Fire-detection and -suppression systems are not in place in one of the 15 storage locations. Adequate fire detection must be coupled with adequate fire suppression or fire damage to collections is

possible. In addition, fire-detection and -suppression systems must be able to function after business hours, which is not possible with fire-safety systems designed to use manual fire alarms only.

Pest Management

Nine (60%) of the 15 storage locations control pests on an as-needed basis by spraying and trap baiting. Six (40%) storage locations have integrated pest-management programs that include both monitoring and controlling of pests on a regular basis. A professional, integrated pest-management program is crucial to the long-term survival of archaeological collections.

Status of Artifacts

BIA artifacts in the archaeological collections discussed in this report consist of approximately 458 ft³ of material recovered from 13 Indian reservations. Most of the collections have not been properly cleaned, labeled, or packaged.

Overall, primary containers (boxes that house a group of artifacts) consist of acidic-cardboard boxes of varying sizes (most of them ~1 ft³), with flap or telescoping lids. Many containers were overpacked and coated with dust. However, all boxes are labeled to some degree, if only with rudimentary information.

Forty-five percent (by volume) of the collections are stored loose in their primary containers, without secondary containers. The majority of secondary containers (those included within the primary container) for the remainder of the collections consist of acidic-paper bags (41%); archival-quality, zip-lock, plastic bags (4%); acidic-cardboard boxes (4%); pillowcases (3%); and nonarchival, plastic bags (1%). Other secondary container types each total less than 1 percent, and include glass vials, plastic film containers, newspaper, manila envelopes, and foam/cardboard trays. Almost all are unacceptable as museum storage media. Only 4 percent by volume of the secondary containers observed were archival, polyethylene, zip-lock bags. Most secondary containers were labeled directly or with interior paper tags, although adhesive labels were also present.

Major prehistoric material classes (by volume) encountered include faunal remains (76%), lithics (19%), human skeletal remains and associated funerary objects (2%), and soil samples (2%). Other material classes that each total less than 1 percent by volume include worked faunal remains and shell, botanical remains, shell, ceramics, ¹⁴C samples, ochre, beads, wood, and mixed/indeterminate. Historical-period material classes examined include ceramics (< 1%), glass (< 1%), metal (< 1%), and plastic (< 1%).

Status of Human Skeletal Remains

At present, all known human skeletal remains recovered from Indian reservations are being curated at four repositories. The Cheney Cowles Museum houses a minimum of 53 individuals, which constitute the majority of the human skeletal remains. Two human vertebrae are present at Western Washington University, three burials are stored at Seattle Central Community College, and the remains of one individual (two teeth) are stored at the Idaho Museum of Natural History. A minimum number of 58 individuals (based on elements present) are included in the BIA collections. The large collection at the Cheney Cowles Museum is extremely fragmented. Other associated burials from the same archaeological project (Columbia River Basin Survey) have been analyzed and repatriated. Complete rehabilitation (e.g., reboxing, rebagging, and labeling) needs to be carried out in order to stabilize the remains; a complete inventory needs to be generated in order to comply with the Native American Graves Protection and Repatriation Act (NAGPRA; P.L. 101-601).

Status of Documentation

BIA collections include a total 69.5 linear inches (5.8 linear feet) of records, which consist of paper, photographic, maps, and draft report records. In addition, the assessment team located multiple project reports (most stored at state repositories) that document archaeological work at reservations and in regions around and on Indian lands.

Professional, archival-quality practices were noted at only one of the repositories. In many cases, paper records have not been placed in acid-free folders, photographs have not been isolated and stored in chemically inert sleeves, and large-scale maps have not been stored flat in map cases.

Rarely was project documentation complete in a repository that also contained the archaeological materials associated with the records. Project documentation was often fragmentary or nonexistent. Collections managers and archaeologists in the past may not have considered associated documentation a part of their curatorial responsibilities. In many cases, records may have been produced, but lost on the way to their final storage area. It is also possible that records were never produced for some of the projects. Regardless, records for many of the collections cannot be located, a problem that should be aggressively addressed.

Status of Repository Management Controls

All of the 11 long-term repositories (GCM Services and Seattle Central Community College) are not considered long-term curation repositories; therefore collections-management standards were not

evaluated and are not included in this section's summary) have accession records for the collections in their possession. A written record of where collections are located within the structures is available at 10 (91%) of the repositories. No repositories have fully inventoried the collections in their care, but all have partially inventoried the collections or are in the process of carrying out this task. Basic policy and procedure statements for artifact curation, inventories, records management, and deaccessioning are present at 9 of the repositories. The assessment team noted that written loan policies were present at nearly three-quarters (73%) of the repositories. Only seven (64%) of the repositories have minimum standards for the acceptance of collections. Four (36%) of the repositories have guidelines for the field curation of archaeological materials, and one has a published guide to the archaeological collections in their care. Ten (91%) of the repositories employ some form of computerized database management for the collections in their care, although some of these include the use word-processing programs or have database systems currently in development. Given the above, it is evident that the collections are at risk and in most cases are not being cared for as required by 36 CFR Part 79.

Corrective Actions

A number of corrective actions are necessary to bring BIA collections, and those repositories housing them, into compliance with 36 CFR Part 79. General recommendations include the following.

1. Bring together all collections into one regionally based, federally owned or leased repository constructed specifically for the curation and long-term management of archaeological collections. If this is not possible, then distribute the collections into existing repositories in their state or territory of origin and use requisite funds to upgrade them to meet federal curation standards. Develop cooperative agreements with other agencies to share capital improvement and collections rehabilitation costs.
2. Develop and implement uniform inventory procedures.
3. Using the uniform system, identify and systematically inventory all archaeological collections and associated documentation recovered from land under BIA jurisdiction.
4. Rehabilitate and/or conserve artifact collections to a standard consistent with those of a professional museum, and rebox and rebag the collections in archival-quality containers. Archivaly preserve all associated documentation and reports.
5. Develop and implement formal archives-management programs.

If implemented, these corrective measures will permit the BIA to meet the minimum federal requirements for the adequate long-term curation of archaeological collections. By adopting this approach, the BIA has the opportunity to implement a curation program that will serve its needs well into the future.

Conclusions

Attainment of each aforementioned corrective action may not be immediately possible. However, timely action is necessary because the artifacts and records are rapidly deteriorating in their current storage environments, and there is no long-term, consistent management plan for their proper curation. BIA archaeological collections can provide important cultural information, but if not properly cared for will lose their potential educational and research value. Implementing the recommended corrective actions will ensure that the collections are more adequately cared for so that they will be available to future generations.

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Lynn Pankonin, Curator of American Indian Collections

GCM Services, Butte, Montana

Lynn Fredlund, Ph.D., President

Idaho Museum of Natural History, Pocatello

Sharon Holmer, Anthropology Collections Manager
Teresa Leberknight, Curatorial and Laboratory Assistant

Idaho State Historical Society, Boise

Glenda King, SHPO Site Records Administrator
Teri DeYoung, Collections Manager
Robert Yohe, Ph.D., State Archaeologist
Joe Toluse, Curator

Oregon State Museum of Anthropology, Eugene

Pam Endzweig, Ph.D., Collections Manager

**Museum of the Plains Indian, Browning,
Montana**

Loretta Pepion, Curator

Museum of the Rockies, Bozeman, Montana

Les Davis, Ph.D., Curator
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Seattle Central Community College, Washington

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**Thomas Burke Memorial Museum, Seattle,
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Sarah Campbell, Ph.D., Professor of Anthropology
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Introduction

The BIA is responsible for archaeological artifacts and associated documentation (hereafter referred to as archaeological collections) stored in 13 repositories in five different states. This responsibility is mandated by numerous legislative enactments, including the Antiquities Act of 1906 (P.L. 59-209), the Historic Sites Act of 1935 (P.L. 74-292), the Reservoir Salvage Act of 1960 (P.L. 86-523), as amended, the National Historic Preservation Act of 1966 (NHPA; P.L. 89-665), as amended, the Archaeological Resources Protection Act of 1979 (P.L. 96-95), as amended, and Executive Order 11593 (now Section 110 of NHPA). The implementing regulation for the preservation of archaeological collections is 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections.

NAGPRA was enacted in 1990 to (1) identify federal archaeological collections that contain Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony and (2) to form agreements between federal agencies and Native American Indian Tribes and Native Hawaiian organizations on the repatriation or disposition of these remains and objects. By November 16, 1993, a summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was to be completed. An inventory of human remains and associated funerary objects was to be completed by November 16, 1995.

In spring 1994, as the first step in complying with 36 CFR Part 79 and NAGPRA, the BIA contacted the St. Louis District of the U.S. Army Corps of Engineers to discuss the development of a memorandum of understanding to address these requirements. The St. Louis District

recommended that the review of BIA collections include evaluating the collections in order to satisfy the federal curation requirements of 36 CFR Part 79 and NAGPRA. The resulting memorandum of agreement authorized the St. Louis District to conduct a curation-needs assessment of BIA archaeological collections. The St. Louis District was to provide the BIA with a general inventory of collections and an estimate of the magnitude of rehabilitation needed to comply with 36 CFR Part 79. In addition, each repository would receive recommendations to correct any deficiencies.

In the memorandum of understanding, the St. Louis District agreed to provide the following:

1. Professional and technical services to the BIA for the inspection and inventory of archaeological collections in selected repositories;
2. A final report that would (a) detail the results of the inspection and evaluation; (b) address the physical description of all repository facilities, recovered-artifact collections, and associated documentation collections; and (c) make recommendations for compliance with the requirements of 36 CFR Part 79; and
3. A master bibliography of reports associated with BIA archaeological collections.

Methods

Thirteen repositories encompassing 15 separate storage locations were evaluated in the course of the curation-needs assessment. Among the

repositories were eight museums (private, state, or university), four university laboratories/curation facilities, and one contract-archaeology firm. The following schedule outlines the repositories visited and the order and dates of visit.

- June 15, 1995, Seattle Central Community College
- July 11, 1995, Idaho Museum of Natural History
- July 13, 1995, Museum of the Rockies
- July 14 and 17, 1995, Museum of the Plains Indian
- July 18, 1995, GCM Services
- August 17 and 18, 1995, University of Idaho
- August 21, 1995, Cheney Cowles Museum
- November 7, 1995, Idaho State Historical Society
- December 4, 1995, University of North Dakota
- December 5, 1995, Oregon State Museum of Anthropology
- December 6, 1995, Washington State University
- December 8, 1995, Western Washington University
- December 12, 1995, Thomas Burke Memorial Museum

Prior to each repository visit, site-file searches were conducted at the State Historic Preservation Offices and/or site-file facilities for Idaho, Montana, Oregon, and Washington. St. Louis District personnel also visited the Billings and Portland Area BIA Offices to conduct record searches.

Prefieldwork Investigation

The following steps were followed in order to identify repositories curating archaeological materials and/or associated documentation within the BIA project area.

1. A National Park Service National Archeological Database and a general records search were performed for each reservation.

2. Topographic maps of each reservation were acquired for the purpose of delineating reservation boundaries to use in the site-file searches.

3. Site-file searches were conducted at State Historic Preservation Offices and/or site-file facilities to determine the sites located within reservation boundaries and to determine where collections might be located.

4. During the site-file searches a database was compiled of all fieldwork reports deposited at the state repositories.

5. Records searches were conducted at two BIA area offices (Billings and Portland) to compile information on archaeological work over and above that obtained during state site-file searches.

6. All institutions and personnel likely to be knowledgeable about the collections were contacted by telephone.

7. A list was compiled of all agencies, firms, and institutions associated with the recovery or curation of materials that are the responsibility of the BIA.

8. Agencies, firms, and institutions were contacted by telephone for information regarding the curation of BIA collections. Information derived from these telephone conversations was then used to create a list of repositories that would be visited during the project.

Field Inspection and Assessments of Repositories and Collections

The following steps were followed to assess each repository's compliance with 36 CFR Part 79.

1. A survey questionnaire soliciting information on repositories, artifact collections, and associated documentation was completed for every repository involved with the curation of BIA archaeological collections.

2. A building-evaluation form was used to determine whether or not the repository complied with the requirements specified in 36 CFR Part 79. The building-evaluation forms address structural adequacy, space utilization, environmental controls, security, fire detection and suppression, pest management, and utilities. Data were gathered both by observation and through discussions with collections and repositories managers.

3. An examination of all associated documentation was conducted to determine the different types, amount present, and their condition. Types of documentation include project and site reports, administrative files, field records, curation records, and photographic records. For each type of document the total linear feet, physical condition of the containers and the records, and the overall condition of the storage environment was collected. A determination was also made regarding whether or not the repository was in compliance with the archives-management requirements specified in 36 CFR Part 79.

4. Artifacts were examined and their condition was evaluated. The assessment included examination of

- a. the condition of the primary and secondary containers,
- b. the degree of container labeling,
- c. the extent of laboratory processing,
- d. the material classes included in each collection, and
- e. the condition of and approximate minimum number of individuals of any human skeletal remains.

Primary containers are generally acidic- or acid-free cardboard boxes that contain artifacts. Secondary containers are the largest receptacles for artifacts within the primary containers and generally represent a wider range of materials. Secondary containers may include, but are not limited to, acidic-paper bags, plastic sandwich bags, archival or nonarchival plastic zip-lock bags, glass jars, film vials, aluminum foil, newspaper, packing materials, and small acidic- or acid-free cardboard boxes.

NAGPRA-Compliance Assessment

To satisfy the requirements of NAGPRA, the following tasks must be performed at each repository holding BIA collections.

1. Conduct a records search of the collections to identify the accession and catalog numbers and the location of human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
2. Perform a physical inspection of storage containers to identify human skeletal remains and associated and unassociated funerary objects.
3. Conduct an analysis of human skeletal remains that includes
 - a. a detailed skeletal inventory listing elements present, their completeness and condition;
 - b. measurements of long bones and crania sufficient to provide basic description of the physical characteristics, stature, and morphology of the skeletal remains;
 - c. estimates of age and gender; and
 - d. descriptions of any pathological conditions, cultural modifications, or evidence of life activities and trauma that might provide evidence of cultural affiliation of the remains or the context from which they were recovered.
4. Produce summary and inventory reports for each repository.

Report Preparation

The following steps are relevant to the production of a final, written report for the project.

1. A written report detailing the results of the curation-needs assessment is required. General information to be included in the report includes estimates of collection size and condition and descriptions of the repositories.
2. Recommendations are provided for the rehabilitation of the repositories and/or the collections, using the federal standards established in 36 CFR Part 79.

Chapter Synopsis

Chapters 2–13 provide a detailed examination of the state of archaeological collections under the jurisdiction of the BIA. Chapter 14 outlines the overall findings of the project. Final general recommendations for the project are provided in Chapter 15. Each chapter contains a collections summary for a reservation, a detailed examination of the repository(s) and the collections, recommendations for the improved care of the collections, and a bibliography of archaeological work conducted on the reservation. In the case of Chapter 9 (Makah Indian Reservation), however, collections for two reservations are discussed—the Makah and the Yakima—because Western State University is the repository for both. Note also that no reports were located that detail archaeological investigations on the Squaxin Island Indian Reservation. A list of references cited follows Chapter 15. Appendix 1 is a bibliography for Indian reservations in the project area for which no collections were located.

A total of 13 repositories (museums, universities, and firms) was visited for the project. Collections are stored in a total of 15 storage locations within the 13 repositories (two repositories had collections stored in two buildings each). Two of the 15 storage locations fulfill all of the standards mandated by 36 CFR Part 79 for curating federally owned archaeological collections. Eight of the 15 storage locations approach approximately one-half or more of the standards mandated by 36 CFR Part 79. Seven (58%) of the 15 storage locations employ full-time personnel for the curation of archaeological collections. Unfortunately, the general conditions of the repositories described in this report reflect the standard of care for archaeological collections across the nation. Funding shortfalls, lack of consistent national policy, and the magnitude of the curation problem have prevented compliance with federal regulations. Without a national strategy and attention to the existing deficiencies, archaeological collections are in danger of continued deterioration. However, with a strong commitment, we can preserve our rich national heritage.

Duck Valley Indian Reservation

Idaho and Nevada

Collections Summary

BIA Area Office Responsibility: Portland

Volume of Artifact Collections: 0.8 ft³

Compliance Status: Artifact collections require no rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials. Artifacts are stored in archival-quality primary and secondary containers.

Linear Feet of Records: < 1 (< 0.25 linear inches)

Compliance Status: Associated records require partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Location of Collections: Idaho State Historical Society, Boise

Collections Identified: Site numbers 100E73 and 100E83

Status of Curation Funding: Curation funding usually occurs on a project-by-project basis (i.e., the federal agency is responsible for providing curation funds). The Idaho State Historical Society, Boise, is the Southwest Idaho Regional Archaeological Center of the Archaeological Survey of Idaho and, therefore, assesses state-standardized curation fees that cover the costs of rebagging, reboxing, etc. Recent NAGPRA funds have provided extra monies for curation-related activities. However, these funds have almost all been spent.

The Duck Valley Indian Reservation, which is located in southwestern Idaho and northern Nevada, was created as the Western Shoshone Indian Reservation in 1877 by executive order. The reservation was created for the Western Shoshone, and the BIA attempted to settle all bands at this location. However, the majority of the bands refused, and Northern Paiutes from Oregon and Nevada began settling the reservation after 1880. The two tribes subsequently organized the Shoshone-Paiute Business Council in 1936. Also in 1936, the reservation was renamed Duck Valley. The land area totals nearly 290,000 acres (Crum 1994).

There was no major archaeological work conducted on the Duck Valley Indian Reservation prior to October 31, 1979. A small collection was assessed at the Idaho State Historical Society (ISHS), which is the state curation repository for southwestern Idaho.

Idaho State Historical Society

Date of Visit: November 7, 1995

Points of Contact: Glenda King, SHPO Site Records Administrator; Teri DeYoung, Collections

Manager; Dr. Robert Yohe, State Archaeologist; Joe Toluse, Curator

BIA Collections Present: Duck Valley Indian Reservation collection from site numbers 10OE73 and 10OE83 (catalog nos. [in series A] 10OE73 and 10OE83, accession no. 1975-23).

ISHS operates the facility housing the State Historic Preservation Office (SHPO), a museum, and an off-site collections storage area. The SHPO structure contains staff offices, a library, and an archaeological processing laboratory and records storage area in the basement. The off-site storage building, located a few miles from the SHPO, was built in 1970 specifically as a curation repository for all ISHS collections, which range from large items of historical-period furniture to small artifacts. Approximately 1 ft³ of artifacts recovered on the Duck Valley Indian Reservation are curated at the off-site ISHS storage area, while a small amount (two pages of a computer-generated artifact catalog) of associated documentation is kept in the basement records storage area of the main ISHS facility. The artifact collection consists exclusively of prehistoric lithics. Most repository information for the ISHS was collected during a visit made primarily for a U.S. Air Force Air Combat Command project (Marino 1996), on the date given above.

Assessment

Structural Adequacy

The ISHS curation repository (Figure 1) is a single-level structure with a built-in partial mezzanine level. The building encompasses 20,160 ft², of which 16,704 ft² is devoted to collections storage, consisting of six 24-x-24-foot bays. Activity areas include a loading area, laboratory and working space, and storage areas. The archaeological collections are currently stored together in one 24-x-24-foot bay near the rear of the structure.

The ISHS curation repository has a concrete foundation and cinder block exterior walls. The roof was originally constructed of built-up asphalt and tar. A layered, membranous covering over foam insulation was added to the rooftop in the early 1980s; it has effectively solved a former leakage problem. The interior ceiling is constructed of plasterboard, with additional insulation installed below the roof. Overall, the building is considered structurally sound. However, there are a few minor cracks along mortar seams between the wall cinder blocks. The main renovation to the structure consisted of the construction of an interior, plasterboard-and-plywood wall, in order to separate and isolate collections storage areas from the front working

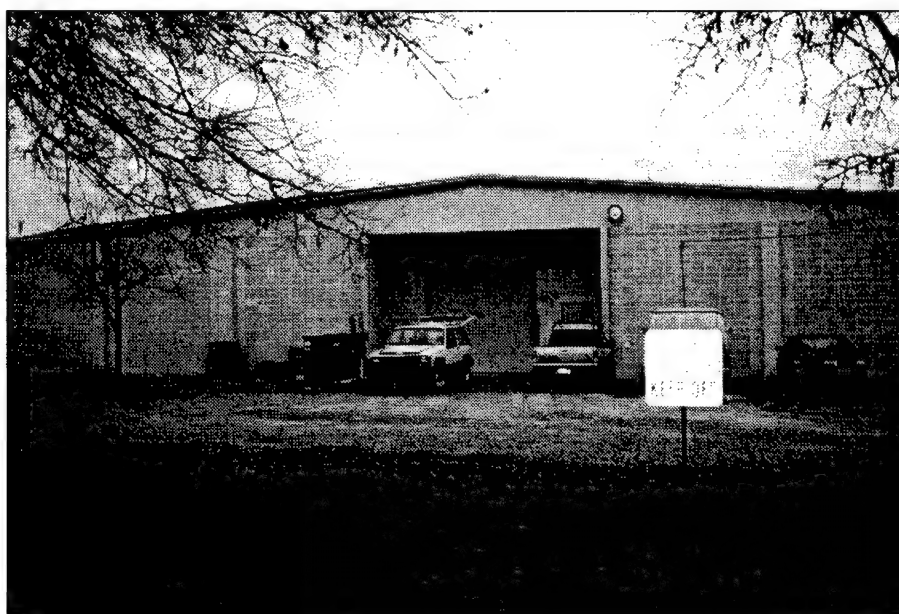


Figure 1. Exterior view of the ISHS's off-site curation facility in Boise.

area. The two windows (on opposite walls) have aluminum frames and are boarded shut. Utilities present in the structure include heating, electricity, running water, rest rooms, and telephones. At present, overall collections storage is estimated to be at 90-percent capacity.

Environmental Controls

ISHS is situated in a high-desert climate. Environmental control consists solely of gas heaters. Neither air-conditioning nor humidity controls are present, but humidity is monitored with hygrothermographs on an as-needed basis. Previous measurements (over 6-month-or-longer periods) have recorded temperatures that fluctuate between 64° and 78° F and relative humidity fluctuations between 30 and 43 percent (the extra insulation in the roof has helped to keep these levels fairly constant). In the past, buckets of water have been set out throughout the building in an attempt to raise the humidity levels; these attempts were unsuccessful owing to the large size of the interior and the high ceiling. No dust filters are present on the furnace ducts. Building maintenance and cleaning is the responsibility of the curator, and usually takes place on a weekly or as-needed basis. Fluorescent lighting is present in the front portion of the structure, while mercury lamps are used in the collections storage areas. Neither type of lighting fixture is equipped with ultraviolet filters.

Pest Management

No integrated pest-management system currently is in place. The repository is monitored on an as-needed basis; no pest-infestation problems have been reported, with the exception of a minor ant problem during summer 1995.

Security

The repository has an intrusion alarm that is wired to a contracted security company. There is a key lock on the exterior, front, metal-panel door. The wooden loading-bay door can only be raised from the inside by an electronic push-button system. The double, metal-panel doors in the rear of the structure, which can only be opened from within, are secured with a specially designed lock. The two windows are locked,

boarded shut, and 14 feet above the ground. In addition, the building has no exterior signs to attract undue attention. Access to the repository is tightly controlled by staff; no incidents of unauthorized entry have ever been reported.

Fire Detection and Suppression

Fire-detection devices consist of smoke alarms and heat sensors (wired into the fire department), as well as manual and remote fire alarms. Fire-suppression equipment includes a wet-pipe sprinkler system and fire extinguishers that were last inspected in March 1995. The structure, with the exception of the roof, is considered fireproof.

Artifact Storage

Less than 1 ft³ of archaeological materials (100% lithics) is stored in the archaeological storage area of the ISHS off-site curation facility. This area currently consists of three rows of metal shelving units (additional space can be procured as needed). Collections are organized according to landowner (e.g., BLM, Corps of Engineers, state, etc.). The BIA collection from the Duck Valley Indian Reservation is currently stored in one plastic storage box.

Storage Units

Storage units for all archaeological collections consist of baked-enamel, metal shelves (Figure 2), measuring 6 × 8 × 3 feet (w × h × d), lined with sheets of 0.75-inches-thick particle board cut to fit each shelf. There are a total of three rows of shelving, with four shelves per unit.

Primary Containers

Primary containers for all artifacts are plastic storage boxes (manufactured by "LewiSystems") that measure 16.5 × 11 × 8 inches. The boxes' telescoping lids are secured with blue plastic seals that must be broken to open the box and, once broken, must be discarded. Each plastic seal is individually numbered, and the numbers are recorded to keep track of each time a box is opened or resealed. Each plastic storage container is labeled on the outside with an index card enclosed in a plastic pouch with two snap attachments. The index card displays a letter and



Figure 2. General view of the metal shelving units holding the plastic storage boxes in the archaeological collections storage area of the ISHS's curation facility. Note the plastic seals used to secure the primary containers shut.

number code (D-1 for the Duck Valley collection), which represents the landowner for the collection.

Secondary Containers

Secondary containers for the Duck Valley collection consist entirely of 4-mil, plastic, zip-lock bags that contain smaller 4-mil, zip-lock bags. The smallest zip-lock bags, containing one lithic each, are labeled on the outside in marker with site number, accession number, catalog number, type of artifact, material class, provenience, repository, date, and weight (in grams). In addition, one of the zip-lock bags has a brown, acidic-paper tag bearing provenience information.

Laboratory Processing and Labeling

All of the Duck Valley artifacts have been cleaned and are labeled directly with black ink on white drawing ink.

Human Skeletal Remains

ISHS is not curating any human skeletal remains recovered from Indian reservations in the project area.

Records Storage

Paper Records

The only records associated with the Duck Valley collection are two pages of a computer-generated printout that bear the artifact inventory. These two pages are stored in the basement of the main ISHS structure. No additional documentation (i.e., field notes, survey records, photographs, maps, etc.) are known to be located at ISHS, with the exception of a single report (see below).

Project Reports

One bibliographic reference was deemed applicable to the Duck Valley collection. It consists of a very general journal article on the field survey and cites neither the Duck Valley sites nor the specific artifacts in the BIA collection.

Collections-Management Standards

Registration Procedures

Accession Files. Artifacts and associated documentation are accessioned upon receipt.

Location Identification. The physical location of the collections is identified in the accession file and in a computer database.

Cross-Indexed Files. Files are cross-indexed in the computer database.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A trinomial site-numbering system is used for site identification.

Computerized Database Management. A dBASE IV program is being used for collections information. Taped backups are made on a daily basis. One backup copy is stored off-site.

Written Policies and Procedures

Minimum Standards for Acceptance. Minimum standards for acceptance are detailed in *The Idaho Archaeological Survey Curatorial Standards and Guidelines*, which is followed by the ISHS and any parties wishing to curate collections at the ISHS.

Curation Policy. There is no comprehensive, formal plan for curation. ISHS is currently in the process of developing a written curation policy.

Records-Management Policy. There is no comprehensive written plan for records management. However, one is being developed in conjunction with the curation policy.

Field-Curation Procedures. Field-curation procedures are addressed in *The Idaho Archaeological Survey Curatorial Standards and Guidelines*.

Loan Policy. Guidelines for loans are detailed on the official loan form. Loans are commonly made for a period of six months.

Deaccessioning Policy. ISHS has a deaccessioning policy.

Inventory Policy. No formal inventory policy has been created.

Latest Collection Inventory. There is an ongoing inventory for NAGPRA-compliance purposes.

Curation Personnel

Multiple staff members have responsibilities for the archaeological collections. Joe Toluse is the curator, and has responsibility for managing the off-site curation facility. Teri DeYoung is the part-time collections manager for the archaeological collections. Glenda King is a full-time site-records administrator for the SHPO. Dr. Robert Yohe is the state archaeologist. Additional assistance (i.e., for data entry and lab work) is provided by several students on a part-time basis.

Curation Financing

Ideally, curation costs are included in federal-project budgets. As part of the Archaeological Survey of Idaho, ISHS assesses curation fees

based on person hours spent on processing a collection, but these fees cover only the minimum costs for reboxing. NAGPRA compliance has resulted in additional funds, but almost all of these funds have been expended.

Access to Collections

Access to the collections is controlled by King and DeYoung, who also supervises student workers (who currently number four).

Future Plans

The main goal of and challenge facing ISHS is to maintain current levels of archaeological curation after the NAGPRA-related funds have been expended. Another goal is to continue to computerize the collections.

Comments

1. The ISHS off-site storage facility does not have air-conditioning or humidity control.
2. There is currently no integrated pest-management program in place.
3. The use of plastic storage boxes secured with nonreusable plastic seals is ingenious and commendable.
4. It is unclear whether associated field notes, survey records, or administrative documents exist.

Recommendations

1. Install an HVAC system. If not possible, monitor humidity through the use of a hygrothermograph or sling psychrometer. Regulate humidity with dehumidifiers.
2. Design and implement an integrated pest-management system.
3. Install ultraviolet filters on fluorescent lights and mercury lamps in the collections storage facility.

4. Remove the brown, acidic-paper tag from one of the two zip-lock bags and transfer the provenience information.

5. If any associated documentation can be located, it should be reunited with the artifacts and curated according to modern archival-preservation standards and guidelines.

Reports Relating to Archaeological Investigations on Duck Valley Indian Reservation

Swanson, Earl H., Jr., Roger Powers, and Alan Lyle Bryan

1964 The Material Culture of the 1959 Southwestern Idaho Survey. *TEBIWA, The Journal of the Idaho State University Museum* 7(2). Pocatello.

Note: Relates directly to the archaeological collections evaluated by St. Louis District personnel.

Fort Hall Indian Reservation

Idaho

Collections Summary

BIA Area Office Responsibility: Portland

regulations and modern archival-preservation standards.

Volume of Artifact Collections: 7.3 ft³

Compliance Status: All collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Human Skeletal Remains: Minimum of one individual (2 human teeth)

Linear Feet of Records: < 1 linear foot (2.0 linear inches)

Compliance Status: All collections require partial rehabilitation to comply with federal

Location of Collections: Idaho Museum of Natural History, Pocatello

Collections Identified: Sampson Site, 10PR27, and a general reservation collection

The Fort Hall Indian Reservation was originally established in 1868 at a conference held at Fort Bridger, Wyoming, which also established the Wind River Reservation in Wyoming. The Fort Hall Reservation originally encompassed 1.8 million acres, but through a series of cessions, primarily related to the founding and growth of the town of Pocatello, Idaho, the reservation was reduced to its present size of 544,000 acres. The land is home to two Indian tribes, the Northern Shoshone and the Bannock, which together are referred to as the Shoshone-Bannocks, or Sho-Bans. The Bannock are a group of Northern Paiute that originally ranged throughout eastern Oregon. The Bannock dialect of the Northern Paiute language is, however, unique to eastern Idaho. Both tribes are commonly grouped in the Great Basin culture area (Loether 1994).

No major archaeological work was conducted on the Fort Hall Indian Reservation prior to October 31, 1979. The largest collection is

from the Sampson site, 10PR27 (Table 1). Fort Hall collections were assessed at the Idaho Museum of Natural History (IMNH), Idaho State University, Pocatello.

Idaho Museum of Natural History, Idaho State University

Date of Visit: July 11, 1995

Points of Contact: Sharon Holmer, Anthropology Collections Manager; Teresa Leberknight, Curatorial and Laboratory Assistant

BIA Collections Present: Fort Hall Indian Reservation collections from the Sampson Site—10PR27 (accession no. 989)—and a reservation

Table 1.
Fort Hall Indian Reservation Collections
at the IMNH

Site Number, by Accession Number	Materials
None	
10BK22	artifacts
10BM103	artifacts
10BM104	artifacts
10PR38	artifacts
10PR47 ^a	
10PR48	artifacts
10PR57 ^a	
10PR80 ^a	
10PR82	artifacts
10PR115 ^a	
10PR116 ^a	
114	
none	human teeth and associated artifacts
688	
10PR60	artifacts
697	
10PR63	artifacts
10PR65	artifacts
10PR69	artifacts
10PR70	artifacts
10PR71	artifacts
10PR84	artifacts
858	
10PR23 ^a	
989	
10PR27	artifacts
1030	
10PR36	artifacts
1046	
10BK26	project documentation
10BK27	project documentation
10BK29	project documentation
10BM21	project documentation
10BM22	project documentation
10BM23	project documentation
10PR9	project documentation
10PR10	project documentation
10PR14	project documentation
10PR33	project documentation

^aThe St. Louis District assessment team was unable to locate these collections during the site visit.

Table 2.
Summary, by Volume, of Material Classes
Present in Fort Hall Indian Reservation
Collections at the IMNH

Material Class	%
Prehistoric	
Lithics	71
Ceramics	3
Human remains (2 teeth)	1
Faunal remains	14
Shell	1
Wood	1
Beads	4
Historical-period	
Metal	5
Total	100

(general) collection (accession nos. 114, 688, 697, 858, 989, 1030, and 1046).

IMNH is one of three state repositories for the curation of archaeological collections, which are collectively known as the Archaeological Survey of Idaho (ASI). ASI is comprised of the Northern and Southwest Idaho Regional Archaeological Centers, located in Moscow and Boise, respectively, and the Southeast Idaho Regional Archaeological Center, located at IMNH. The southeastern region encompasses 24 counties, and includes the Fort Hall Indian Reservation. Current BIA holdings at IMNH include 7.3 ft³ of artifacts and 2.0 linear inches of associated documentation from the Fort Hall Indian Reservation. The artifact collection consists primarily of prehistoric materials, with a small amount of historical-period artifacts. Of the total, prehistoric material classes include lithics (71%), ceramics (3%), human remains (2 teeth; 1%), faunal remains (14%), shell (1%), wood (1%), and beads (4%), whereas the sole historical-period material class is metal (5%) (Table 2).

IMNH is located on the campus of Idaho State University, Pocatello (Figure 3). It is one tenant in a multipurpose structure, sharing space with administrative offices and academic departments. The museum occupies parts of two floors

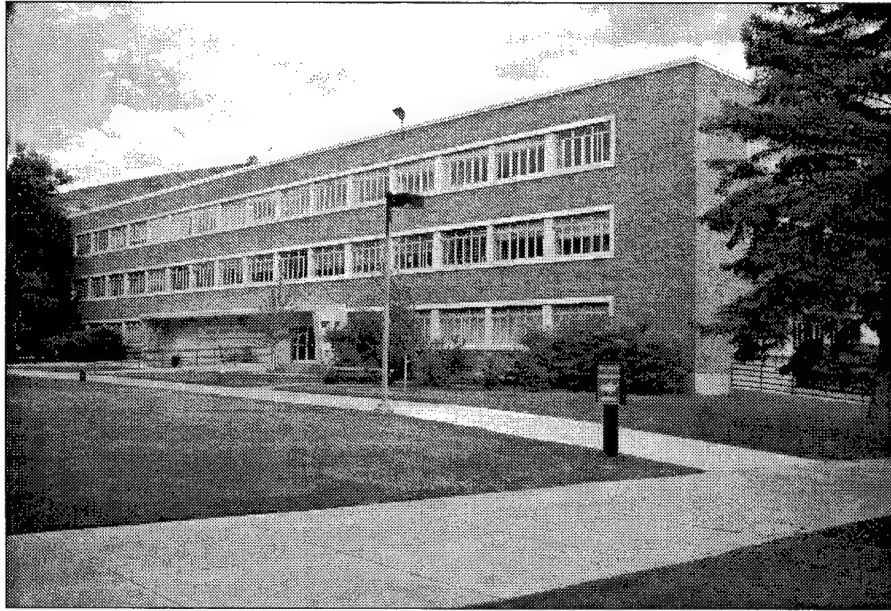


Figure 3. Exterior view of the IMNH on the campus of Idaho State University in Pocatello.

in the structure. The anthropology collections storage areas are located in the basement. The collections storage areas encompass two permanent collections storage rooms, one temporary storage area (for human skeletal remains and associated artifacts only), and a room devoted to records storage. The artifact collections are divided and stored primarily by material class and secondarily by site and/or project.

Assessment

Structural Adequacy

The museum structure houses various divisions, including the museum itself, anthropology, paleontology, and earth sciences, of which anthropology occupies 2,903 ft² (the ground floor plus approximately one third of the basement). The repository was originally built in the 1960s for use as a university library. The structure has a concrete foundation, while exterior walls are brick and concrete block. Interior walls consist of metal studs, plasterboard, and poured concrete. Interior floors are concrete. The roof is constructed of built-up asphalt, and was renovated within the last 2 to 3 years. The building is structurally solid; no cracks or leakage have been reported since the renovations were completed 1.5 years ago.

The structure has four floors, three above-ground and one below. There are multiple windows on all sides, most of which have shades and wooden frames. All windows in the museum galleries have been sealed on the ground floor, and removed in the basement (where the collections storage areas are located).

Anthropological and archaeological collections storage areas encompass approximately 3,000 ft² of the 18,225 ft² basement. In addition to areas for anthropological and archaeological storage and conservation, the basement contains offices, classrooms, laboratories for other museum divisions, rest rooms, and mechanical and electrical rooms.

Anthropological and archaeological collections are stored in four rooms in the basement. For the most part, these rooms are dedicated to the storage of artifacts (Collections Storage Area 1), records (Collections Storage Area 2), ethnographic materials (Collections Storage Area 3), and human skeletal remains (Collections Storage Area 4). The floor, ceiling, and walls forming the basement exterior are constructed of concrete.

Collections Storage Area 1

The artifact storage room contains the majority of the BIA collections from the Fort Hall Indian Reservation (five boxes). The storage area

measures approximately 540 ft². The floor of the room is concrete, while the interior walls are constructed of metal studs under plasterboard, plywood, and poured concrete. The ceiling is concrete, and there are no windows in the room. The one solid, wooden door leads directly into the anthropology collections office. Collections Storage Area 1 is considered to be high-density storage for archaeological collections only; it is filled with storage units to approximately 80-percent capacity.

Collections Storage Area 2

The records storage room measures approximately 338 ft². It contains the associated documentation (records and photographs) for all archaeological and anthropological collections in the museum. Interior walls on three sides are plywood and plasterboard. There are no windows in the room. The one door is made of solid wood and leads directly into the anthropology collections office. The room is filled with storage units to approximately 80-percent capacity.

Collections Storage Area 3

The ethnographic storage room measures approximately 1,673 ft², and contains a small amount of ceramic artifacts from the Fort Hall Indian Reservation. The room is located beyond the artifact conservation laboratory and across the hall from the anthropology collections office. This storage space is devoted solely to ethnographic collections, including ceramics, baskets, and textiles. Interior walls on three sides are plywood and plasterboard. There are no windows in the room. The one door is composed of solid wood, and leads into the artifact conservation laboratory. It is currently filled with storage units to approximately 75-percent capacity.

Collections Storage Area 4

The human skeletal remains storage room measures approximately 140 ft². It was recently converted from a general storage and supplies room into a temporary storage area for human skeletal remains and associated artifacts. Interior walls on three sides are plywood and plasterboard. There are no windows in the room, and the one wooden door leads directly into the corridor. It

is currently filled with storage units to approximately 95-percent capacity.

Environmental Controls

IMNH operates an HVAC system, which is equipped with dust filters, for environmental control. The system utilizes multiple, zoned pumps for heating and air-conditioning. Humidity is occasionally monitored by a sling psychrometer, and the assessment team also noted a hygrothermograph in Collections Storage Area 3. The targeted temperature in the collections storage areas is 68° F. An attempt is made to stabilize relative humidity within a 10-percent range. However, on rainy days, relative humidity levels can fluctuate as much as 20 percent. There are plans for installing a more-comprehensive monitoring system in the future. The university regularly oversees the general maintenance of the building, but the various collections storage areas are maintained by curatorial staff on an as-needed basis. Lighting in the collections storage areas consists of fluorescent tubes equipped with ultraviolet filters.

Pest Management

Each division occupying the building is responsible for pest management in its area. Both the anthropology and museum divisions currently have pest-control measures in place, consisting of mousetraps and the isolation of all new collections (and freezing them beforehand if necessary). Fumigation occurs only on an as-needed basis. No comprehensive pest-monitoring program is currently in place, but an integrated pest-management program is planned for the future.

Security

University staff are responsible for securing all exterior doors of the structure, and campus security guards patrol at night. Security measures for the collections storage areas include key locks for the exterior doors and the use of secured, adjoining rooms as buffers (Collections Storage Area 4 is the sole exception, as it opens directly to the corridor). Access to keys is tightly restricted by the collections manager (she and the museum registrar are the only staff with keys to a lockbox that contains room keys).

Fire Detection and Suppression

Fire-detection devices are present throughout the repository, and include manual fire alarms and smoke detectors. Fire suppression is provided by fire walls and doors, fire extinguishers, and a sprinkler system. The fire alarms are wired into the fire department, as well as university security and maintenance departments. In addition, there is a computerized, wall-panel display located on the ground floor that can pinpoint the locations of activated alarms. However, the repository is not considered fireproof. In addition, no fire extinguishers were noted in the collections storage areas, although smoke detectors were present.

Artifact Storage

Storage Units

Collections Storage Area 1. Storage units in the artifact storage room are baked-enamel, metal space-saver cabinets that roll on tracks (Figure 4). Each cabinet is numbered, and measures approximately $1.5 \times 8.6 \times 9.8$ feet (w \times h \times d). Each cabinet is double-sided, with each side containing four shelves across three vertical sections (Figure 5). These cabinets occupy the entire west side of the room. In addition, there are metal shelves, along the east side of the room, for temporary storage of artifacts. Locations of particular boxes of collections are filed

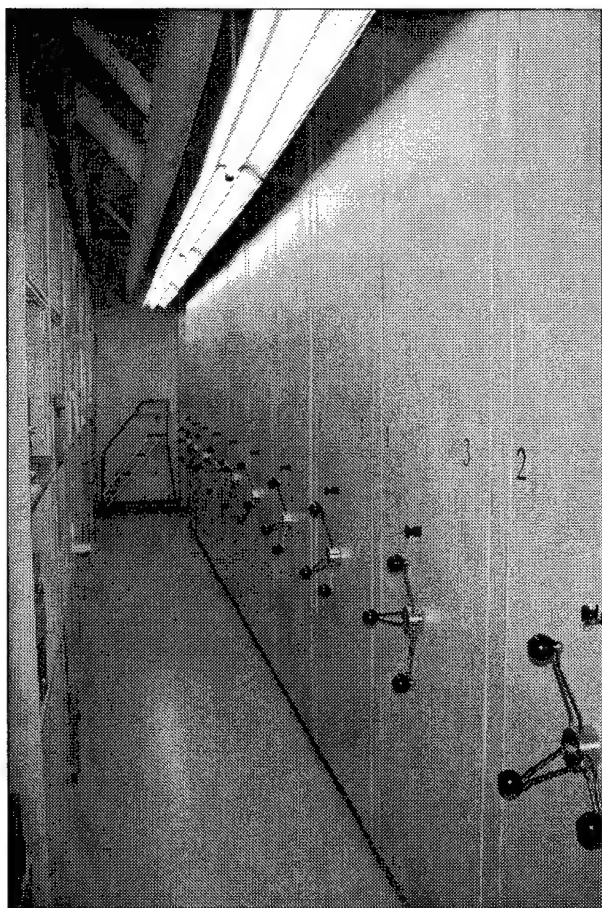


Figure 4. Space-saver cabinets used to store nonsensitive items (i.e. lithics) in Collections Storage Area 1, where the majority of the BIA collections from the Fort Hall Indian Reservation are stored at the IMNH.

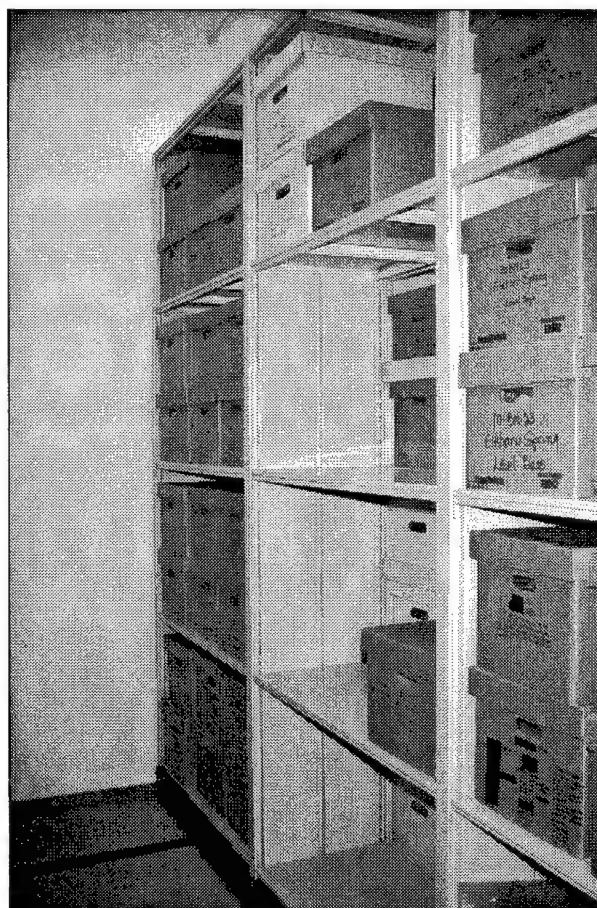


Figure 5. Acid-free cardboard primary containers are stored inside the baked enamel metal space-saver storage units in Collections Storage Area 1 at the IMNH.

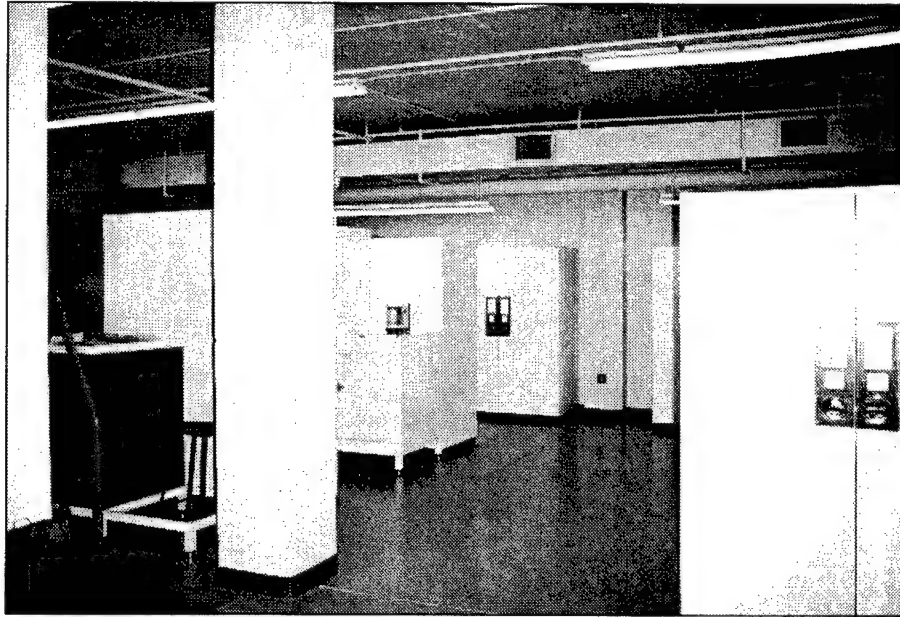


Figure 6. General view of Collections Storage Area 3 where the ceramic artifacts from the Fort Hall Indian Reservation are stored at the IMNH.

in the same room in an index-card catalog, which is organized by site number. This information is also contained in the computer database.

Collections Storage Area 3. The ethnographic storage room contains baked-enamel, metal storage cabinets (Figure 6). Each cabinet is numbered, and measures approximately $2.7 \times 6.5 \times 4.8$ feet (w \times h \times d). Location information is filed in the index-card catalog and computer database mentioned above.

Collections Storage Area 4. This room temporarily houses all human skeletal remains and associated artifacts in the museum. The exact location of the two human teeth and associated artifacts recovered from the Fort Hall Indian Reservation was not determined during the site visit and the appropriate storage unit was thus not documented. However, storage units in this room mainly consist of locking, baked-enamel, metal cabinets, each with multiple sliding drawers.

Primary Containers

Approximately 7 ft³ of artifacts from the Fort Hall Indian Reservation are stored at IMNH. Material classes in the collection are summarized in Table 2. Artifacts are stored in five 1.4-ft³, acid-free, cardboard boxes with telescoping lids

in Collections Storage Area 1. Artifacts are also located in one section of a pull-out, metal drawer that encompasses 3.4 ft³ within a metal storage cabinet in Collections Storage Area 3 (Figure 7). Boxes are labeled directly on their sides in marker. The metal drawer is not labeled on its exterior.

Secondary Containers

Secondary containers consist of 2-, 4-, and 6-mil, plastic, zip-lock bags. One ground stone artifact is stored loose. All zip-lock bags are labeled directly in marker or other ink with site number information and, in one case, provenience information. The smallest containers consist of zip-lock bags, acidic-paper bags and cardboard boxes, and one plastic vial.

Laboratory Processing and Labeling

All of the artifacts have been sorted by material class and cleaned. The majority have been labeled directly in ink over white correction fluid, and in one instance yellow correction fluid, with site numbers.

Human Skeletal Remains

Currently, IMNH is temporarily curating two human teeth (premolars) from the historical-period graveyard on the Fort Hall Indian Reservation



Figure 7. A metal pull-out drawer within a metal storage cabinet in Collections Storage Area 3 is the primary container for the ceramic artifacts from the Fort Hall Indian Reservation being curated at the IMNH.

under accession number 114 (individual artifact numbers 3524-9 and 3424-10). The artifacts were recovered, with the teeth, in excavation backdirt; therefore, they may fit into the category of either associated or unassociated funerary objects as defined in NAGPRA. The two teeth, and artifacts, are stored in a room set aside for human skeletal remains, but were not located at the time of the assessment team's visit. It is not the IMNH's mission or intention to curate human skeletal remains on a permanent basis.

Records Storage

IMNH curates less than 1 linear foot of records documenting archaeological work conducted on the Fort Hall Indian Reservation. All documentation is original, except for photocopies made of some materials considered unstable. All types of records are stored together and organized by accession number. The finding aid consists of a red binder that lists projects alphabetically; accession numbers are included. The binder also contains inventory sheets that show the presence or absence of various types of documentation, all of which should be filed with the accessioned records. Researchers depositing collections are now required to submit duplicates of all original

records; the originals must stay in the files at all times. In addition, original accession records are kept upstairs in the Registrar's Office. A recent National Endowment for the Humanities grant provided funds for the complete reorganization and rehabilitation of records, resulting in the grouping of documentation by project in acid-free, archival folders and negative sleeves. Staff are currently ensuring that everything is accessioned. All records are housed in Collections Storage Area 2.

Paper Records

There are 1.5 linear inches of paper records (site forms, field notes, and administrative records) stored in Collections Storage Area 2. Storage units consist of heavy, metal filing cabinets. The cabinets are fireproof and secured with key locks. Each measures 1.5 × 4.7 × 2.6 feet (w × h × d) and contains four drawers. The drawers are labeled on their exteriors with yellow, self-stick notes marked in pencil (a temporary measure only), which bear the range of accession numbers filed inside (Figure 8). Secondary containers are acid-free folders within hanging folders, which are labeled in pencil with accession number and project name.

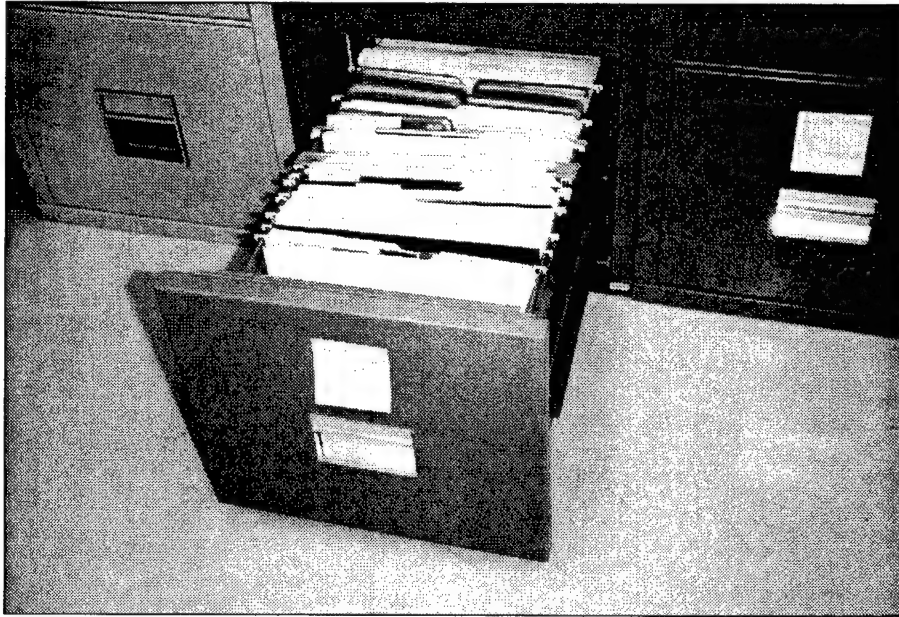


Figure 8. Example of a fireproof metal filing cabinet containing documentation curated in acid-free, archival folders in Collections Storage Area 2 at the IMNH (the self-stick note label on the drawer is only a temporary measure).

Maps and Oversized Documents

Cartographic records consist of large maps, totaling 0.25 linear inches, that are stored folded with the paper records.

Project Reports

One report (0.25 linear inches) is stored with the paper records.

Collections-Management Standards

Registration Procedures

Accession Files. All archaeological collections are accessioned upon receipt.

Location Identification. The location of archaeological collections within the repository is maintained both in an index-card catalog and in the anthropology collections files in the computer database.

Cross-Indexed Files. Files are cross-indexed by site number, catalog number, accession number, site name, owner, and location. The files are not yet complete.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A trinomial site-numbering system is used for site identification.

Computerized Database Management. IMNH has implemented a computerized database-management system for its archaeological collections using the REGIS program. The key data fields include site number, catalog number, accession number, site name, land owner, and location. Backups of these records, on both disk and tape, are made every two weeks. Backups are made every other day when data are being entered. At least one backup copy is stored off-site at the Archaeological Survey of Idaho. The database-management system is not part of a network. There are several levels of passwords to which only the curation staff of three have access.

Written Policies and Procedures

Minimum Standards for Acceptance. Minimum standards for the acceptance of collections are detailed in *The Idaho Archaeological Survey Curatorial Standards and Guidelines*, and are followed by IMNH.

Curation Policy. There is a general museum collections-management policy, last updated in June 1989, that addresses the acquisition of

objects, their deaccession and disposal, loans, and the use of collections, among other subjects. A *Disciplinary Collection Policy—Anthropology* is included. In addition, there is a *Procedures Manual*, which is a three-ring binder containing all the forms used by the museum and instructions on how to fill them out.

Records-Management Policy. A records-management policy is included in the *Procedures Manual* mentioned above.

Field-Curation Procedures. Field-curation procedures are addressed in *The Idaho Archaeological Survey Curatorial Standards and Guidelines*.

Loan Policy. Loans are addressed in the museum's collections-management policy.

Deaccessioning Policy. Deaccessioning is addressed in the museum's collections-management policy.

Inventory Policy. According to the collections-management policy, a baseline inventory of all anthropology collections should have been completed in 1991. Spot checks of each collection (including documentation and physical location) are to be conducted at least once every five years.

Latest Collection Inventory. The curator reports that a collection inventory is currently in progress.

Curation Personnel

There is currently no full-time curator for the archaeological collections. Sharon Holmer holds the title of anthropology collections manager, but she is a half-time employee. Her position is funded by "soft" money, mainly from federal grants that must be matched by the university. Also on staff is a one-fifth-time curator from the Anthropology Department and a graduate assistant who serves as a curatorial and laboratory assistant. There is also supposed to be a registrar for the museum, but the position is currently vacant.

Curation Financing

IMNH currently provides financial support for less than one full-time curatorial position. Curation is financed mainly by federal and state grants, with additional project-specific funding provided by sponsoring federal agencies (e.g., BLM, Forest Service, Bureau of Reclamation,

Department of Energy, etc.) that curate artifacts at IMNH. The university provides space and physical-plant support for the museum. Staff feel that the current funding level is inadequate. They estimate that a yearly curation budget of \$50,000 would be sufficient. This would provide wages for one full-time collections manager, one-to-two students, and the cost of materials.

Access to Collections

Three staff have access to the archaeological collections. They include the collections manager, the curator, and a graduate assistant. Only the collections manager and the museum registrar have access to the lockbox where keys are kept.

Future Plans

Plans for the immediate future are to finish accessioning and cataloging all artifacts and records. For example, the associated documentation is being divided into more-specific categories (such as survey reports, photographic records, etc.), and will be entered into the computer files separately. Other goals include locating any additional associated documentation, further researching the collections, and continuing to write grant proposals for collections care.

Comments

1. The assessment team noted a hygrometer-mograph in Collections Storage Area 3, the ethnographic collections storage room, but no similar monitoring devices are present in the other storage areas.
2. There is currently no comprehensive, uniform system of pest monitoring or control. However, an integrated pest-management program is planned for the future.
3. No fire extinguishers were noted in the collections storage areas, but smoke alarms were present. Some of the storage cabinets containing collections are currently located under sprinkler and steam pipes.
4. Currently, only key locks are used for securing collections storage area doors and cabinets,

but access to the keys is tightly controlled by the collections manager.

5. Although collections storage space is currently adequate, the collections manager believes that many federal agencies are still holding artifacts and, therefore, additional curation space at IMNH is likely to be needed. A need for additional storage space should be anticipated.

6. The majority of primary containers for artifacts are acid-free, cardboard boxes. Secondary containers are archival, but the majority of the smallest containers are acidic-paper bags or cardboard boxes, and acidic-paper tags are stored with some artifacts.

7. As part of an ongoing documentation reorganization-and-rehabilitation project, paper records are now stored in acid-free folders within fireproof cabinets. IMNH is close to completing their inventory of documentation and new accessioning system. However, additional storage space will likely be needed in the future.

8. Sharon Holmer, the anthropology collections manager since 1987, has instituted formal collections-management policies and procedures for IMNH, obtained grant monies for state-of-the-art storage cabinets and other conservation materials, and computerized collections information by site and accession numbers, among other things. Her commitment to curation is commendable, especially in light of the fact that she was only recently upgraded to half-time. Holmer believes that IMNH is the best physical-curation repository in the state, but that it lacks the personnel and upper-management-level support of curation activities within the museum to staff it adequately.

Recommendations

1. Ensure that relative humidity levels are monitored on a regular basis in all collections storage

areas by installing hygrothermographs in the archaeological and records storage rooms.

2. Install fire extinguishers in the collections storage areas. Move collections from under steam and sprinkler pipes. If not possible, move shelving to parallel the overhead pipes, and not directly under them.

3. Install an electronic security system for the building and collections storage areas, and wire it into both the local police and campus security. If not possible, add dead bolt or cipher locks to the collections storage areas.

4. Replace any acidic-paper bag and cardboard box containers with four- and six-mil, polyethylene, zip-lock bags. Label these archivally with site number, accession number, and provenience. Remove all acidic-paper tags currently stored in the smallest containers with artifacts and transfer all label information to the exteriors of the secondary containers.

5. Provide full-time funding for the collections manager and at least one other staff member (or several part-time, student positions).

Reports Relating to Archaeological Investigations on Fort Hall Indian Reservation

Butler, B. Robert, and Lucille Harten

1978 *Final Report on a Prehistoric Human Burial Recovered from the Blackfoot Reservation, August, 1977*. Idaho Museum of Natural History, Pocatello.

Miss, C. J., C. Druss, M. Druss, and A. Ottesen

1981 *Archaeological Investigations Gay Mine Area Fort Hall Idaho, 1978*. Manuscript on file, Fort Hall, Idaho.

Nez Perce Indian Reservation

Idaho

Collections Summary

BIA Area Office Responsibility: Portland

comply with federal regulations and modern archival-preservation standards.

Volume of Artifact Collections: 4.8 ft³

Compliance Status: All collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Human Skeletal Remains: None

Location of Collections: Alfred W. Bowers Laboratory of Anthropology, University of Idaho, Moscow

Linear Feet of Records: 1.2 linear feet (14.75 linear inches)

Compliance Status: All collections of associated records require partial rehabilitation to

Collections Identified: Clearwater Survey and Test, 10NP293, and East Kamiah Test

The Nez Perce were once one of the most numerous and powerful of the Plateau Tribes, with ancestral lands ranging from Oregon and Washington east to the northern Great Plains. At contact, the Nez Perce were regarded as excellent horsemen, and began a thriving horse trade with Euroamerican settlers. Perhaps the most famous aspect of Nez Perce history is the War of 1877, or Chief Joseph's War, which ended in eventual capture of the remainder of the tribe just miles from freedom in Canada. Treaties establishing the reservation boundaries were signed in 1855 and 1863, the latter date being when boundaries were drastically reduced. Today the reservation occupies almost 100,000 acres, nearly two-thirds of which is allotted, or private, land (Walker 1994).

No major archaeological work was conducted on the Nez Perce Indian Reservation prior to October 31, 1979. There are small collections, how-

ever, including those from the Clearwater Survey and Test and the East Kamiah Test (Table 3). Collections were assessed at the Alfred W. Bowers Laboratory of Anthropology (Bowers Lab), University of Idaho, Moscow.

Alfred W. Bowers Laboratory of Anthropology, University of Idaho

Dates of Visits: August 17–18, 1995

Point of Contact: Leo Flynn, Curator

BIA Collections Present: Nez Perce Indian Reservation collections from the Clearwater Survey and Test (accession no. 76-18), 10 NP 293

Table 3.
Nez Perce Indian Reservation Collections
at the University of Idaho

Site Number, by Accession Number	Materials
76-18	
10LE37	project documentation
10LE38	photographs
10NP105	photographs
10NP167	photographs
10NP168	photographs
10NP169	photographs and artifacts
80-3	
10NP293	project documentation and artifacts
81-6	
10IH867	project documentation and photographs
10IH881	photographs and artifacts

(accession no. 80-3), and the East Kamiah Test (accession no. 81-6).

Bowers Lab is an academic department of the University of Idaho that is involved in processing, analyzing, and curating artifacts from field projects conducted by the university. By state designation, Bowers Lab is the most northern of three regional repositories for artifacts recovered in the state—the Northern Idaho Regional Archaeological Center (NIRAC). The region encompasses the northern 10 counties of the state and includes three Indian reservations: Coeur d'Alene, Kootenai, and Nez Perce. Bowers Lab currently curates only artifacts and associated documentation from the Nez Perce Indian Reservation; these collections consist of approximately 5 ft³ of artifacts and 1.2 linear feet of associated documentation. The artifact collection consists primarily of prehistoric items, but some historical-period artifacts are included. Of the total, prehistoric material classes include lithics (54%), ceramics (1%), faunal remains (7%), worked shell (1%), ochre (2%), soil

Table 4.
Summary, by Volume, of Material Classes
Present in Nez Perce Indian Reservation
Collections at the University of Idaho

Material Class	%
Prehistoric	
Lithics	54
Ceramics	1
Faunal remains	7
Worked shell	1
Soil	27
¹⁴ C	3
Ochre	2
Mixed/indeterminate	1
Historical-period	
Glass	2
Metal	2
Total	100

(27%), ¹⁴C (3%), and mixed/indeterminate (1%), whereas historical-period material classes include glass (2%) and metal (2%). Table 4 summarizes the materials classes of Nez Perce Indian Reservation collections curated at Bowers Lab.

Bowers Lab is housed primarily in Pinney Hall, on the main campus of the university. However, assorted collections storage areas are located in the adjacent Brink Hall, which is physically connected to Pinney (Figure 9). Artifact storage for BIA collections is in one room (Collections Storage Area 1) in Brink Hall. Records are stored within a room (Collections Storage Area 2) in Pinney Hall.

Assessment

Structural Adequacy

Pinney Hall encompasses 29,000 ft², while Brink Hall encompasses 60,000 ft². Bowers Lab occupies an estimated 20,000 ft² of Pinney Hall. The Pinney Hall-Brink Hall complex was originally constructed as a dormitory in the mid-

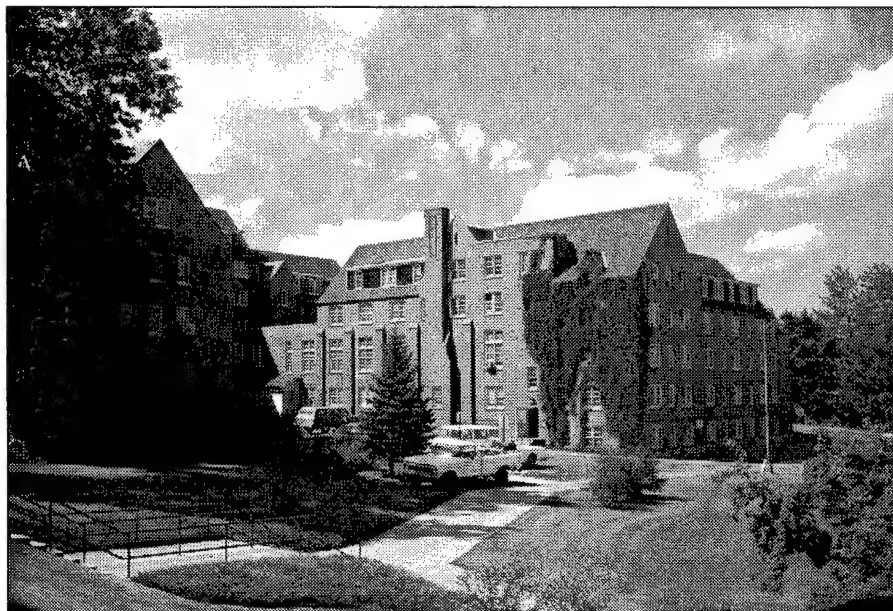


Figure 9. Exterior view of Bowers Lab at the University of Idaho, which is housed in Phinney (right) and Brink Halls.

1930s. The foundation is concrete, while exterior walls are brick and interior walls are constructed of concrete block and plasterboard. Interior floors are concrete. The roof is composed of wood and asphalt shingles that has resulted from a combination of original construction materials and materials used during periodic renovations. The structure is solid, with no cracks apparent, but there is some belowground leakage.

The Phinney Hall-Brink Hall complex consists of five floors, four aboveground and one below. There are multiple external windows, most of which have shades. Window frames are wooden. For the most part, the windows and their frames are original to the structure; they do not appear to leak air or water. There have been multiple internal renovations in the process of converting the structure from dormitory to offices, laboratories, and curation rooms. Asbestos is present in the structure, but is encapsulated.

Collections Storage Area 1

The artifact storage room, located in Brink Hall, measures 250 ft². The floor of the room is concrete, while interior walls are composed of concrete block and wood. The concrete block walls form an exterior wall of the building, while plasterboard walls form interior divisions in the

repository. The ceiling is composed of wood, and there are no windows in the room. There is one door, which leads to other portions of the building. Collections Storage Area 1 houses only archaeological materials; it is filled to approximately 60-percent capacity.

Collections Storage Area 2

The archives storage room measures 120 ft² and is located in Phinney Hall. The floor is composed of concrete covered with tile, and interior walls are plasterboard. The ceiling is composed of plaster. There is one window to the exterior of the building, and it is not shaded. However, the window is completely blocked by large file cabinets and map cases that run the width of the room. The window frame is wood, with no leakage evident. There is one wood-panel door leading to the remainder of the repository. Collections Storage Area 2 houses only records, including maps and photographs, and is filled to approximately 80-percent capacity.

Environmental Controls

The repository complex is equipped with hot-water-radiator heating, but no air-conditioning system is present. However, individual rooms have window air conditioners. Humidity is

monitored with pocket-sized, digital hygrothermographs in several rooms, but is not controlled. There are no dust filters for the air-circulation systems. The buildings are regularly maintained by campus custodial staff, but the collections storage areas are maintained by curatorial staff on an as-needed basis.

Collections Storage Area 1

Heating is accomplished by hot-water radiators, but there is no air-conditioning. Humidity is monitored by a pocket-sized hygrothermograph, but no means of humidity control is present. Although high humidity is not generally a problem in northern Idaho, large daily fluctuations are possible. Lighting is provided by fluorescent tubes and incandescent bulbs, neither having ultraviolet filters.

Collections Storage Area 2

Environmental controls are identical to those in Collections Storage Area 1, discussed above, with the exception that no humidity monitoring device is present.

Pest Management

Bowers Lab has an integrated pest-management program. Monitoring is accomplished with sticky traps; when a pest-infestation problem occurs it is controlled by periodic fumigation. Bowers Lab can initiate control procedures; fumigation is conducted by the campus entomology department. The only recurrent pest-infestation problem has been with cockroaches.

Security

Phinney Hall and Brink Hall have a variety of security measures. Bowers Lab shares an interior door with another department; there is an intrusion alarm (sound only) on this door. Various storage rooms have cipher locks on their doors. Only curation staff and the director have the combination and special access keys. However, the primary security measure on most doors is key locks, access to which is tightly controlled by curatorial staff. In addition, the campus is regularly patrolled by campus and city police. Key locks are the only security measures on the exterior doors of Collections Storage Areas 1 and 2.

Fire Detection and Suppression

There are a number of fire-suppression measures in the repository complex, but no fire-detection systems are present. Smoke detectors have been requested. The repository has manual fire alarms, a water hydrant, and multiple dry-chemical fire extinguishers in various locations. The repository is equipped with a deluge-type sprinkler system that is located in the eaves of the structures. If a fire activates the system, it is meant to drench the building from the top down. There are no additional fire-detection or -suppression systems in either collections storage area. However, several cabinets housing documentation in Collections Storage Area 2 are fire-proof. In their current storage units, maps and photos would probably not survive a fire.

Artifact Storage

Storage Units

Storage units for artifacts consist of wooden shelves that measure 25 × 8 × 1.5 feet (w × h × d; Figure 10) and are located in the rear of the room. In the center of the room, storage shelves do not run the entire width of the room; a 4-foot aisle is left through the center of the room for access. Each shelf has a box number taped to its forward edge, which corresponds to the box immediately above. Primary-container numbers may be accessed through the computer or other finding aids.

Primary Containers

Artifacts are stored in five acidic-cardboard boxes, four of which have a volume of 1.2 ft³ (Figure 11). The remaining box has a volume of 0.03 ft³. Boxes are labeled directly with pencil and, in the case of the smaller box, marker. The box labels are legible, but fading. A few tears are evident in the boxes, but they are otherwise serviceable. Lids consist of folded flaps that are taped shut.

Secondary Containers

Secondary containers consist largely of four- and six-mil, plastic, zip-lock bags (Table 5). Paper bags compose an additional 35 percent of the collection. Most secondary containers are labeled, directly in marker, with accession

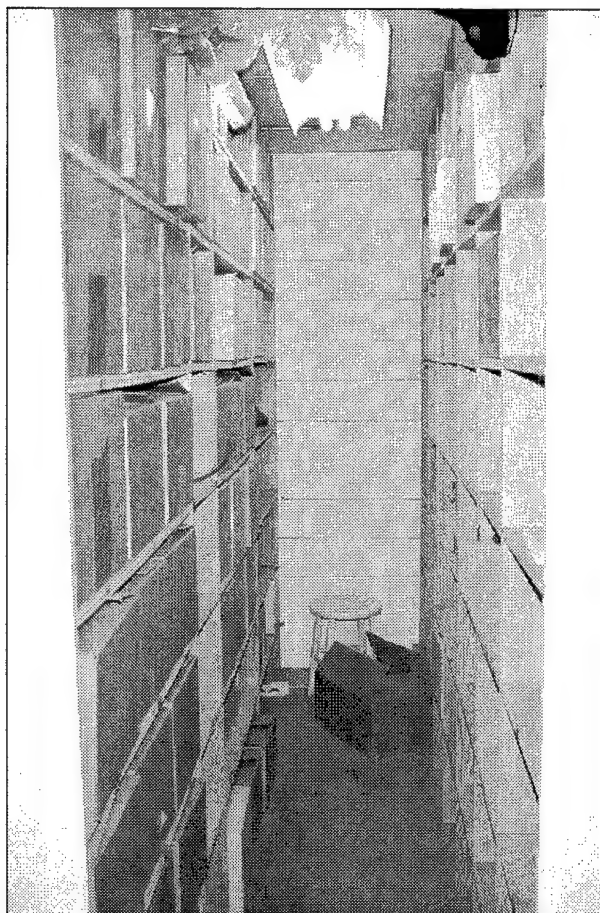


Figure 10. Aisle in Collections Storage Area 1 where artifacts from the Nez Perce Indian Reservation are stored in acidic cardboard boxes on wooden shelves.

number, site number and, in some cases, provenience. The zip-lock bags in one of the primary containers are not directly labeled on their exteriors, but they have interior paper bags that are labeled in the same manner with the same information (see Figure 11).

Laboratory Processing and Labeling

All of the artifacts, excluding soil samples, have been properly cleaned. Approximately 25 percent of the artifacts have been labeled directly. These artifacts are labeled with ink on white correction fluid, when necessary, for visibility. Information consists of site number.

Human Skeletal Remains

The University of Idaho does not currently curate any human skeletal remains or associated funerary objects recovered on Indian reservations.

Records Storage

The university curates 1.2 linear feet (14.75 linear inches) of records documenting archaeological work conducted on the Nez Perce Indian Reservation. In general, all documentation is original, or an original copy, and is in good condition. It is arranged by accession number, and there are finding aids available to help locate the documentation.

Paper Records

There are 9.75 linear inches of paper records stored in Collections Storage Area 2. The storage units consist of one letter-size file cabinet and one legal-size file cabinet; both cabinets are fireproof. The letter-size file cabinet measures 1.3 × 4.7 × 2.4 feet (w × h × d), and has four drawers. The legal-size file cabinet measures 1.7 × 4.7 × 2.5 feet (w × h × d), and also has four drawers. Secondary containers consist of acidic-paper folders with adhesive labels (Figure 12). Information on the labels is typed, and consists of project name, or accession number, and document type. Bound materials (field notebooks) are either labeled with a typed paper label taped on their exterior or directly in pen or marker. Label information consists of project name, or accession number, and document type.

Photographic Records

Photographs total 2.5 linear inches, and are stored in separate storage units. Storage units consist of open metal shelving units that measure 3.1 × 4.6 × 1.3 feet (w × h × d), each with four shelves (Figure 13). Photographs are stored in black vinyl binders labeled with the accession numbers typed on paper tags. Photographic documentation consists of black-and-white prints, contact sheets, slides, and negatives. Contact sheets are inserted directly into the binder. Negatives, black-and-white prints, and slides are held in archival-quality, clear, plastic sleeves. All photographic materials are labeled, either

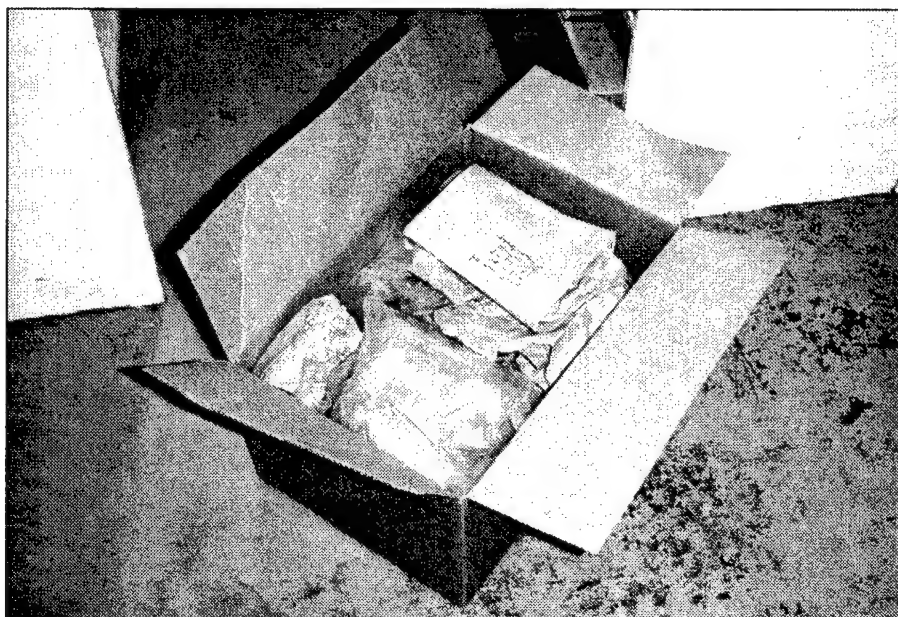


Figure 11. The interior of one primary container holds secondary containers consisting of both plastic zip-lock and paper bags.

Table 5.
Summary, by Volume, of Secondary
Containers Used for Nez Perce Indian
Reservation Collections
at the University of Idaho

Container Type	%
Divided cardboard boxes	2
Paper bags	35
Plastic film canisters	1
Plastic, zip-lock bags	62
Total	100

directly on the plastic sleeves or on the backs of the materials themselves.

Maps and Oversized Documents

Approximately 0.5 linear inches of maps are stored in Collections Storage Area 2. Most small maps are folded and stored in the letter-size file cabinet with paper records. Large, and some small, maps are stored flat in a separate, multiple-drawer storage unit, which is a metal, flat map case that measures 4.5 × 2.6 × 3.3 feet (w × h × d).

Project Reports

Two linear inches of reports associated with the Nez Perce archaeological materials are stored with paper records in Collections Storage Area 2. They are stored in letter-size and legal-size file cabinets. Secondary containers are acidic-paper folders with typed, adhesive labels.

Collections-Management Standards

Registration Procedures

Accession Files. Not all archaeological collections are accessioned upon receipt. Some are held by researchers until their investigations are complete and are then given to the curator; the materials are then accessioned, and a complete record is maintained on both paper and computer database.

Location Identification. The location of the materials within the repository is identified in the accession files, on both paper and computer database.

Cross-Indexed Files. Files are cross-indexed by site number and accession number.

Published Guide to Collections. No guide to the collections has been published, but staff plan

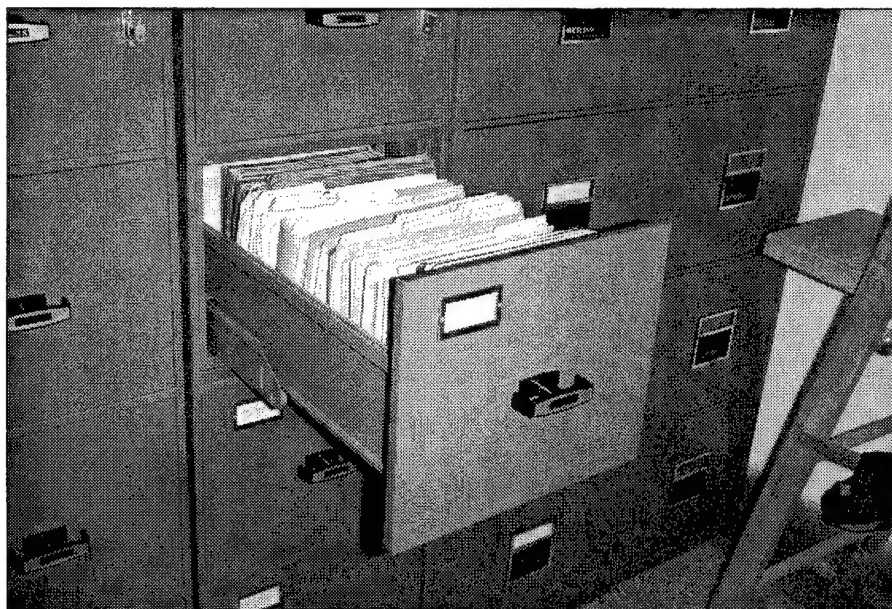


Figure 12. Fireproof filing cabinet drawer in Collections Storage Area 2 houses associated documentation in acidic manila folders.

to post a list of the collections as a page on the Internet.

Site-Record Administration. A trinomial site-numbering system is used for site identification.

Computerized Database Management. The University of Idaho has an extensive computerized database system for the management for its archaeological collections. The program in use is FOXPRO; there are several databases for collections information, including one each for documents, photographs, personnel, institutions, materials, and basic information. The key fields for each database are accession number and site number. The database-management system is not part of a network, and is strictly supervised by the curator. In addition to backups for data changes, backups are conducted on a weekly basis. Backups are recorded on tape, and off-site copies are stored at the Idaho Archaeological Survey and with other major institutions that the university has curation agreements with.

Written Policies and Procedures

Minimum Standards for Acceptance. Minimum standards for acceptance are outlined in *The Idaho Archaeological Survey Curatorial Standards and Guidelines*, which is followed by the University of Idaho.

Curation Policy. There is a curation policy, but it has not been approved by university administration. The plan addresses receipt, processing, preservation, use, and future plans for archaeological materials.

Records-Management Policy. There is a records-management policy, but it has not been approved by university administration. The plan outlines guidelines and standards for the curation of paper records, photographic records, and maps and for the preservation of these materials.

Field-Curation Procedures. Field-curation guidelines are outlined in the curation policy, discussed above.

Loan Policy. University-approved loan procedures are outlined in the curation policy and the records-management policy, discussed above.

Deaccessioning Policy. A deaccessioning policy is outlined in the curation policy and the records-management policy, discussed above.

Inventory Policy. No formal inventory policy is in place. However, collections are inventoried at least monthly for evidence of damage or loss, as stipulated in the curation policy discussed above.



Figure 13. Open metal shelving unit in Collections Storage Area 2 at the University of Idaho where photographic records are stored in black vinyl binders. Negatives, prints, and slides are held in archival-quality clear plastic sleeves.

Latest Collection Inventory. Collections are inventoried on a monthly basis.

Curation Personnel

There is no full-time curator for the archaeological collections. There is one half-time curator, Flynn, and one technical-records specialist who is also employed on a half-time basis.

Curation Financing

The University of Idaho provides financial support for one-half of one curation position, and the Crabtree Endowment provides financial support for the other half. The university also provides the space and physical plant support for Bowers Lab. Equipment, physical additions,

etc., are acquired through contracts with federal agencies that curate artifacts at the university. Staff feel that funding is inadequate for the long-term curation of artifacts and associated documentation.

Access to Collections

Three staff have access to the archaeological collections; access by others is tightly controlled. The staff with access include the director of the lab, the curator, and the technical-records specialist.

Future Plans

Flynn is continuing to upgrade the computerized database-management system. He believes it may not currently be economical to provide environmental controls and additional security measures for most of the repository, and he hopes to construct or purchase a number of micro environments in which special artifact collections can be housed. For example, an existing walk-in refrigeration unit will serve well in this capacity after some renovation. Flynn plans to address the special needs of selected artifact classes in this manner.

Comments

1. The university has a well-integrated computer-database system that links many important data fields by site number and accession number. Data fields for accession numbers include, but are not limited to, information on the project, personnel and institutions involved, documentation, artifacts, and locations, conditions, and status of artifacts and records.
2. The entire repository has central heating, but air-conditioning is present only in certain rooms. Neither collections storage area is air-conditioned. There is no means of humidity control.
3. There is no electronic security system for the repositories, and there are only key locks on exterior doors and doors to the collections storage areas.
4. The university has an integrated pest-management system that includes monitoring and controlling of pest infestations.

5. The deluge-type sprinkler system is not an adequate nor desirable method of fire suppression. There is no means of fire detection.
6. The curator is funded only one-half time for curation activities, as is the case for the technical-records specialist.
7. Artifacts are stored in acidic-cardboard boxes, and approximately 35 percent of the secondary containers are not archival quality.
8. Paper records are stored in acid-free folders within fireproof file cabinets. However, photographic records are stored in vinyl binders on open shelving.

Recommendations

1. Install an HVAC system for the repository. A suitable alternative would be to move the artifact collections to a room with a window and window air-conditioning unit, and to rearrange Collections Storage Area 2 and install a window air-conditioning unit. In addition, a pocket-size hygrothermograph should be used in the archives storage room, and dehumidifiers should be installed in both collections storage areas.
2. Install an electronic security system for the repository and the collections storage areas. Link the system to campus and city police. Add dead bolt locks or cipher locks to the doors of the collections storage areas.
3. Replace the deluge-type sprinkler system with a sprinkler system that is zoned by floor and area. This ensures that collections not at risk during a fire are not automatically destroyed. Do not store collections under overhead pipes. In addition, install an electronic fire-detection system that is wired to the local fire department. Ensure that regularly checked fire extinguishers are distributed throughout the repository and collections storage areas.
4. Fund the curator and the technical-records specialist on a full-time basis.
5. Rebag artifacts in archival-quality, 4- and 6-mil, plastic, zip-lock bags, and rebox in acid-free cardboard containers or other archival-quality primary containers. Archival label bags and boxes with accession number, site number, and provenience, at minimum.
6. Remove photographic materials from their current storage units and place them in a fire-proof filing cabinet similar to the one that paper records are stored in. Produce duplicates of all documentation on acid-free paper or microfilm and store these at a separate, secure location in the same archival method.

Reports Relating to Archaeological Investigations on Nez Perce Indian Reservation

Chance, David H.

- 1978 *Archaeological Tests and Excavations at the Agency Office Area, Spalding, Idaho: A Summary of the Work on July and August, 1978*. Laboratory of Anthropology, University of Idaho, Moscow.
- 1978 *Interim Report of the Fall Excavations at Spalding, Idaho, in 1978*. Laboratory of Anthropology, University of Idaho, Moscow.
- 1979 *First Summary of the Archaeological Excavations at Spalding, Idaho, during the Spring of 1979*. Laboratory of Anthropology, University of Idaho, Moscow.

Knudson, Ruthann

- 1978 Letter report (78-9A) to Nez Perce Tribal Executive Committee (Wilfred Scott). Laboratory of Anthropology, University of Idaho, Moscow.
- 1978 Letter report to Selway Ranger District, Nez Perce National Forest (Darrel L. Kenops). Laboratory of Anthropology, University of Idaho, Moscow.
- 1978 Letter report (May 17, 1978) to Nez Perce Tribal Executive Committee (Wilfred Scott). Laboratory of Anthropology, University of Idaho, Moscow.

- 1978 Letter report (August 30, 1978) to Nez Perce Tribal Executive Committee (Wilfred A. Scott). Laboratory of Anthropology, University of Idaho, Moscow.
- 1979 Letter report (May 11, 1979) to USDI, Northern Idaho Agency (Ray Petterborg). Laboratory of Anthropology, University of Idaho, Moscow.
- 1980 Letter report to U.S. Bureau of Indian Affairs, Northern Idaho Agency (Lawrence Helms). Laboratory of Anthropology, University of Idaho, Moscow.
- Shawley, Stephen D.
1977 Nez Perce Trails. Rev. 1984. *University of Idaho Anthropological Research Manuscript Series* No. 44. Moscow.
- Stapp, Darby, Edgar Bryan, and Diana Rigg
1984 The 1978 Clearwater River Survey. *University of Idaho Anthropological Research Manuscript Series* No. 82. Moscow.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- Marshall, Alan Gould
1977 *Nez Perce Social Groups: An Ecological Interpretation*. Unpublished Ph.D. dissertation, Department of Anthropology, Washington State University, Pullman.
- Waldbauer, Richard C., Ruthann Knudson, and Thomas Dechert
1981 The East Kamiah Site, Clearwater River Valley, Idaho, as Known from Test Excavation. *University of Idaho Anthropological Research Manuscript Series* No. 64. Moscow.

Blackfeet Indian Reservation

Montana

Collections Summary

BIA Area Office Responsibility: Billings

Volume of Artifact Collections: 400 ft³
(estimated)

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: None

Compliance Status: The Museum of the Plains Indian has not been successful in obtaining any associated documentation from the original excavator, Dr. Thomas Kehoe, Curator Emeritus at the Milwaukee Public Museum. For

that reason, they have never accessioned or curated the BIA collection. Essentially, it is an orphaned collection that has been moved several times within the museum during the last several decades.

Human Skeletal Remains: None

Location of Collections: Museum of the Plains Indian, Browning, Montana

Collections Identified: Boarding School Bison Drive Site (24GL302) and Dr. Thomas Kehoe's Bison Bone Experiment

The Blackfeet Indian Reservation is the federally established reservation for the Blackfeet Indians, which include the Piegan/Pigunni, one of four closely related tribes generally subsumed under the name Blackfeet. The other three tribes, including the Blackfeet proper, are located on reservations in Canada. The Blackfeet Reservation in Montana reached its present size of approximately 3,000 square miles in 1897. Between 1855 and 1897 the reservation also occupied much of northern Montana west of the Rocky mountains. Today, the reservation encompasses mostly plains. Glacier National Park abuts its west side.

In the 1950s, Dr. Thomas Kehoe, then curator of the Museum of the Plains Indian, excavated the Boarding School Bison Drive Site on the Blackfeet Indian Reservation. The excavation

resulted in extensive collections of bison bone, and a small quantity of lithics. In addition, Dr. Kehoe performed some experiments on modern bison bone, and these materials have been integrated with the former collection. In total, the collection encompasses an estimated 400 ft³, not precisely measured because of the conditions and methods of storage.

In the 1960s, Dr. Kehoe took a position at the Milwaukee Public Museum, Wisconsin, and took materials from the Boarding School Bison Drive with him. These materials included a small amount of bone tools and lithics. In the transition, all of the documentation associated with the Bison Drive Site were lost. During recent contact between St. Louis District personnel and Dr. Kehoe, he agreed to and is in the process of sending the artifacts stored in

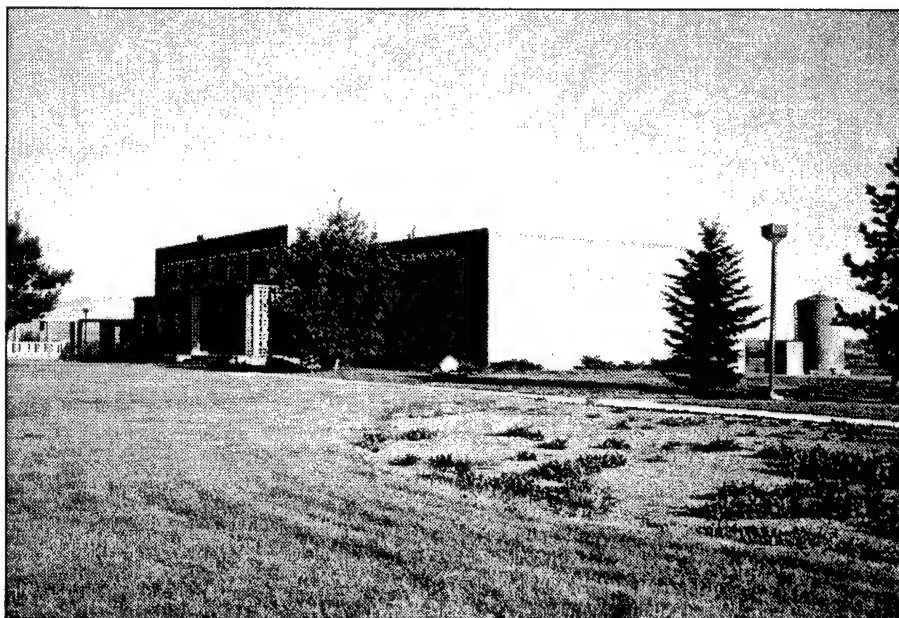


Figure 14. Exterior view of MPI in Browning, Montana.

Milwaukee (< 1 ft³) to Dr. Marvin Keller at the BIA Area Office in Billings. Most of the collection is stored on the Blackfeet Indian Reservation, at the Museum of the Plains Indian (MPI), Browning, Montana (Figure 14).

Museum of the Plains Indian

Dates of Visits: July 14 and 17, 1995

Point of Contact: Loretta Pepion, Curator

BIA Collections Present: Blackfeet Indian Reservation collections from the Boarding School Bison Drive Site (24GL302) and Dr. Thomas Kehoe's Bison Bone Experiment.

MPI exhibits and preserves Native American arts, crafts, and traditions, primarily focusing on the tribes of the northern Great Plains. It is administered by the Indian Arts and Crafts Board, a federal agency within the U.S. Department of the Interior (sister organizations include the Southern Plains Indian Museum and Crafts Center in Anadarko, Oklahoma, and the Sioux Indian Museum and Crafts Center in Rapid City, South Dakota). MPI is currently holding, but not technically curating, BIA collections from the

Blackfeet Reservation that total an estimated 400 ft³. Approximately 7 ft³ of this total is the result of an experiment on modern bison bone. The artifact collection, with the exception of modern bison bones that have been added to it, consists solely of prehistoric materials. Material classes include lithics (16%), ceramics (1%), faunal remains (bison bone; 80%), botanical (1%), soil (1%), and ¹⁴C (1%) (Table 6). The collections, which were excavated by Dr. Thomas

Table 6.
Summary, by Volume, of Material Classes
Present in Blackfeet Indian Reservation
Collections at the MPI

Material Class	%
Prehistoric	
Lithics	16
Ceramics	1
Faunal remains ^a	80
Botanical	1
Soil	1
¹⁴ C	1
Total	100

^a Bison

Kehoe in the 1950s, have never been formally accessioned by the museum because of a lack of associated documentation, title, and funds.

The collections storage area for the BIA collections is located in a makeshift storage room in the basement, separate from the museum's own collections. The curator estimates that 95 percent of the museum's collections are ethnographic, while the remainder are archaeological. The entire BIA collection is archaeological.

Assessment

Structural Adequacy

MPI, originally built as a museum in 1939, encompasses 13,148 ft² of floor space. It has a concrete foundation and brick exterior walls. The structure, with steel-beam and-concrete construction and thick walls, was built to withstand the high winds that blow out of the nearby Rocky Mountains and onto the northern Great Plains. The roof consists of built-up asphalt covered by tar and gravel, and was renovated five to six years ago. However, there have been some leaks through seams in roof. In addition, flooding has occurred in the basement (no collections were affected), and an earthquake last summer caused some minor cracks in the foundation.

MPI has two floors aboveground and one below. Multiple external windows have shades and original wooden frames, through which dirt is often blown by strong winds. Asbestos may be present in the plaster walls of the lobby, which are sealed with lime and painted over with murals.

BIA collections have recently been consolidated and moved into one windowless basement room that encompasses approximately 120 ft². The floor and ceiling are concrete, and the walls are painted brick. Both the interior door leading into a small room in the rear and the exterior door opening directly into the hallway are composed of wooden panels. The volume of material in the room has exceeded the storage capacity of the area.

Environmental Controls

MPI has an HVAC system equipped with dust filters. Hot-water radiators supply heating

throughout the repository. Central air-conditioning is present for the ground-floor exhibition galleries, while the offices upstairs are equipped with window air-conditioning units. Humidity is monitored by hygrothermograph in most areas of the repository. To counteract the dry climate that is typical of northwestern Montana, plastic jugs of water occasionally are placed in strategic areas of the repository. An unusually wet summer in 1995 caused higher-than-normal humidity levels in the museum. The repository is maintained and swept out by staff on an as-needed basis.

No environmental-monitoring devices or controls are present in the BIA collections storage room. Lighting is provided by fluorescent tubes that are not equipped with ultraviolet filters.

Pest Management

MPI does not have an integrated pest-management program. However, a new monitoring system currently utilizes sticky strips. The curator is most concerned with the possibility of bacteria and microorganisms developing in organic materials within the ethnographic collections.

Moth crystals are used as a control measure in the collections storage room. This area is checked for mice every fall, and metal traps are set on an as-needed basis.

Security

MPI has an intrusion alarm that is wired into the police departments of Browning and Billings. Every exterior door except the front door is equipped with dead bolted and key locks. There are motion detectors inside the structure. There are locks and metal bars on the windows. Access to the collections storage room is limited to the hall door at the foot of the stairs and the exterior door to the room itself, both of which are locked with keys controlled by the curator.

Fire Detection and Suppression

The overall repository is considered fire resistant due to its cement-and-steel-beam construction. It should be noted, however, that ceremonial smudging is often performed in the building. Heat and smoke sensors were updated last year and are located throughout the museum, including the basement storage room. Fire

alarms are wired into the local police department, which notifies the fire department. There is a metal fire door on the boiler room. Fire extinguishers, which are inspected annually, are the only means of fire suppression. There is an extinguisher located in the hallway immediately outside the basement storage room.

Artifact Storage

Storage Units

The storage units in the collections storage room consist of four shelves lined against opposite sides of the room. On one side of the room is a two-level, solid-wood shelf that spans the length of the room at hip height; it measures 12 × 3 × 2.7 feet (w × h × d). Another wooden shelf, which has four levels, is set on top of the first one; this second shelf measures 5.4 × 5.5 × 2.1 feet (w × h × d). In the other side of the room is a five-level, wooden shelf that measures 3 × 6.6 × 1.5 feet (w × h × d) and a four-level, baked-enamel shelf measuring 4 × 7.1 × 1.3 feet (w × h × d). Some primary containers are stacked directly on the floor.

Primary Containers

Most primary containers are acidic-cardboard boxes, of various sizes, that are piled haphazardly on shelves (Figure 15). No finding aids are available. The boxes are over packed, torn, compressed, water stained, dusty, and/or deteriorating. So precariously are some boxes perched on top of one another that it was determined too dangerous and time-consuming to attempt to reach, let alone examine, all of them; however, an attempt was made by St. Louis District personnel, resulting in an estimate of the collections' characteristics. An overall, estimated volume of 400 ft³ was calculated by roughly measuring the amount of space the boxes took up as a whole.

This vast collection was excavated by Thomas Kehoe in the 1950s and is composed primarily of bison bone (see Table 6 for a breakdown of all artifact material classes). The exterior of these boxes are labeled directly in marker with site number/collection name. In addition, there are three acidic-cardboard boxes containing bones from an experiment Kehoe conducted. Most of the boxes are open, with larger bones



Figure 15. General view of the haphazardly piled boxes containing bison bone on one side of the basement storage room at the MPI. Note how the boxes nearly reach the overhead ceiling pipe.

protruding from the tops of the boxes (Figure 16). Others have flap lids that are folded shut. There are also five wooden drawers, each measuring 17 × 7 × 18 inches (w × h × d), which are stacked on top of each other on the floor in front of the metal shelf (Figure 17). The drawers are not labeled, and they contain a mixture of mainly prehistoric lithics and ceramics. A small percentage (< 5%) of the primary containers are acidic-paper bags or loose artifacts.

Secondary Containers

Approximately half of the BIA artifacts are stored loose in their primary containers (Table 7). Paper bags comprise the majority of the secondary containers (almost 40%), and many are torn. Most secondary containers are labeled

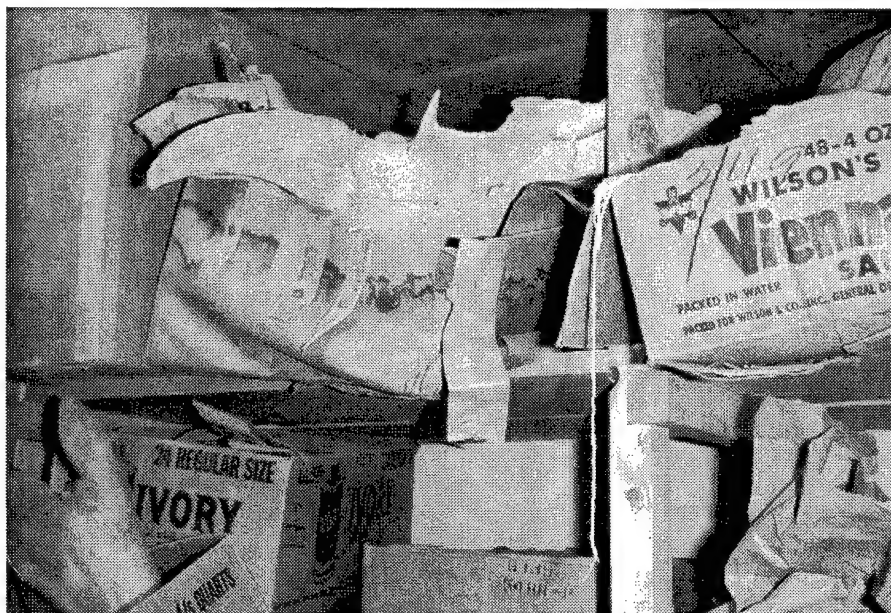


Figure 16. Close-up view of damaged and deteriorating acidic primary containers at the MPI. Note how a large bison skull protrudes from the top of one box.

in pen, pencil, or marker with site and catalog numbers and, in some cases, provenience information. However, others are not labeled or contain interior, paper tags with inconsistent label information. The smallest containers, which include additional paper bags, cardboard boxes and lids, 4-mil zip-lock bags, aluminum foil, and cotton sheets (wrapped around bison bone), are tucked inside many secondary containers.

Laboratory Processing and Labeling

Approximately 50 percent of the artifacts are not labeled, while the remainder are labeled in ink, directly or over white correction fluid, with site and catalog numbers. It appears that most of the artifacts, excluding the charcoal and soil samples, have been sorted by material class and cleaned.

Human Skeletal Remains

MPI is not curating any human skeletal remains recovered from Indian reservations in the project area.

Records Storage

No records associated with the BIA collection are stored at MPI. Associated records were at one time in possession of Dr. Thomas Kehoe,

but over the years have been misplaced and not relocated (Thomas Kehoe, personal communication 1995).

Collections-Management Standards

Registration Procedures

Accession Files. All materials are accessioned upon receipt.

Location Identification. The locations of collections within the museum are identified in the accession file (except for the BIA collections, which were never formally accessioned).

Cross-Indexed Files. The curator estimates that 75 percent of the files are cross-indexed. This does not include historical-period collections.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A site-numbering system is utilized for site-record administration.

Computerized Database Management. The museum recently contracted Willoughby and Associates to install their SNAP! program into the museum's one computer. However, the curator is dissatisfied with the results. One computer password is used among the museum's three

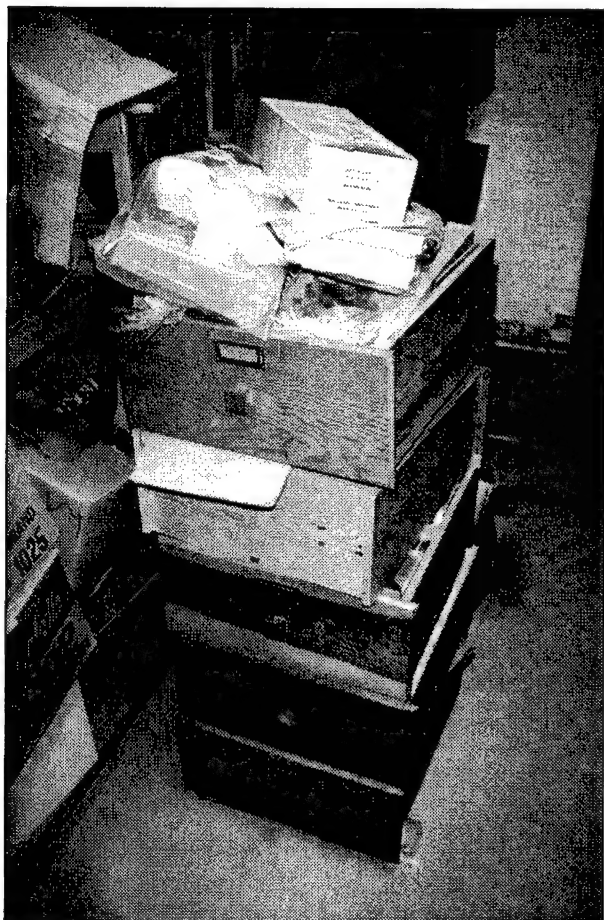


Figure 17. Unlabeled wooden drawers containing a mixture of prehistoric ceramic and lithic artifacts are stacked directly on the floor at the MPI.

Table 7.
Summary, by Volume, of Secondary Containers Used for Blackfeet Indian Reservation Collections at the MPI

Container Type	%
Cardboard boxes	4
Loose	50
Paper bags	39
Pillowcases	4
Plastic bags	1
Plastic, zip-lock bags	1
Round tin cans	1
Total	100

staff members (all of whom have access). The hard drive currently provides the only backup for all of the records.

Written Policies and Procedures

Minimum Standards for Acceptance. Collections are accepted at the curator's discretion.

Curation Policy. There is a curation policy.

Records-Management Policy. There is a records management policy.

Field-Curation Procedures. Field-curation guidelines are unnecessary, as 95 percent of the MPI collections are ethnographic, the remaining are archaeological.

Loan Policy. No loan policy has been created.

Deaccessioning Policy. There is a deaccessioning policy.

Inventory Policy. An inventory is completed every five years or as needed (it is cited on the Gift Agreement form).

Latest Collection Inventory. An inventory was completed in Fall 1994.

Curation Personnel

The curator, Loretta Pepion (M.A.), has been with the museum since 1967. She considers the majority of her training to have been on-the-job, supplemented by a number of courses in collections care sponsored by the National Park Service. The two other staff members are a secretary and a museum technician.

Curation Financing

The museum is administered by the Indian Arts and Crafts Board, U.S. Department of the Interior; its entire budget must be appropriated annually by Congress. Severe budget cuts within the federal government proposed for the upcoming fiscal year have nearly eliminated the museum. However, it is believed that the museum will continue to exist, albeit with a 10-percent reduction in funding. Money has never been earmarked by the museum for curating the BIA collection. Instead, all federal money goes into the day-to-day operations of the museum and the care of its own collections. Curation financing, therefore, will most likely defer to sustaining the

museum's day-to-day operations. The curator believes that the current annual funding level for the museum (\$110,000–\$130,000) is insufficient, and estimates that \$200,000 would be a more reasonable figure from which to draw support for curation.

Access to Collections

Although all three staff members have access to the collections, it is the curator who retains ultimate knowledge and control. When researchers provide a valid reason and documentation, supervised access to the collections is granted.

Future Plans

The most immediate goal is to insure the museum's long-term survival. The curator believes that safeguarding the collections for the future is vital for education about, and preservation of, her culture. Therefore, collections care and preservation will continue to be the museum's highest priority. To this end, the curator has indicated a growing need for additional collections storage space.

Comments

1. Some leakage has occurred through seams in the roof, and cracks in the structure may have resulted from an earthquake last summer. The curator reports that the basement has sustained some flooding in the past, although no collections seem to have been affected. However, there are some boxes of BIA collections in the basement storage room that are currently stacked directly on the floor.
2. The museum does not employ a systematic method of environmental control beyond placing jugs of water in various areas in an attempt to counteract the normally dry climate. However, humidity levels in the summer of 1995 have been high due to unusually wet weather.
3. There is currently no comprehensive, integrated pest-management system in place at the museum. However, control measures are in place (e.g., sticky strips, moth crystals, mouse traps).
4. Security measures for the museum are fairly good. Intrusion alarms are wired into two police departments, and motion detectors are installed. Exterior doors are equipped with dead bolt and key locks. The interior entrance doors to the basement and to the BIA collections storage room have key locks.
5. Fire protection in the museum consists of heat sensors and smoke alarms wired into police and fire departments. However, fire suppression only consists of fire extinguishers placed throughout the repository. There is a fire extinguisher located outside the BIA collections storage room.
6. The artifact primary containers consist of acidic-cardboard boxes, most of which are in very poor condition. There is no order in the stacking of the boxes, and exterior labels, when present, are inconsistent.
7. The majority of the artifacts are stored loose in their primary containers or have acidic-paper bags as secondary containers. Most of the smallest containers, like the secondary containers, consist of nonarchival materials.
8. The museum has always operated with a minimal staff. Essentially, one curator has had to fill a multitude of roles with very little help.
9. Since MPI relies solely on annual federal funding (which is shrinking rapidly and may soon vanish altogether), priority has always been placed on curating the museum's own collections and maintaining daily operations. As a result, the BIA collections have not fared well over the decades. The overall condition of the artifacts, storage containers, and storage area is generally poor. The BIA collections storage area is not indicative of the museum's curation standards for its own collections.
10. The excavator of the BIA collections at MPI, Dr. Thomas Kehoe (now at the Milwaukee Public Museum), retained, and has apparently now misplaced, the original associated documentation. This lack of associated records is one of the main reasons that the museum has never officially accessioned, or curated, the collections.

However, the current museum curator, Loretta Pepion, has indicated a willingness to accession and curate these collections if the associated records are located.

Recommendations

1. Evaluate whether any faults (e.g., roof leakage and cracks) in the structure may adversely affect the collections. In case flooding reoccurs, move the boxes containing BIA artifacts off the floor of the basement storage room.
2. Install an accurate environmental-monitoring and -control system that includes air-conditioning for the collections storage area. If not possible, monitor humidity with a hygrothermograph or a sling psychrometer and equip the collections storage area with dehumidifiers and humidifiers.
3. Install a sprinkler system for fire suppression.
4. Rebox and rebag the artifacts into acid-free primary and secondary containers. Secondary containers should consist of 4- or 6-mil, polyethylene, zip-lock bags. Archivaly label primary and secondary containers with site number, project name, accession number, and provenience.
5. Locate the original documentation (currently misplaced by Dr. Kehoe), if possible, in order to assess the current research value and potential of

the BIA collections. If the records cannot be found, a decision must be made regarding the future curation of the BIA collections at MPI.

Reports Relating to Archaeological Investigations on Blackfoot Indian Reservation

Butler, B. Robert, and Lucille Harten

- 1978 Final Report on a Prehistoric Human Burial Recovered from the Blackfoot Reservation, August, 1977. *Idaho Museum of Natural History Archaeological Report* No. 18. Pocatello, Idaho.

Kehoe, Thomas F.

- 1955 *Museum Notes and News*, 1(2). Museum of the Plains Indian, Browning, Montana.
- 1967 The Boarding School Bison Drive Site. *Plains Anthropologist, Memoir* No. 4, 12:35:1-165.

Note: Relates directly to the archaeological collections evaluated by St. Louis District personnel.

- 1971 *Fieldwork Conducted during 1971 by the Milwaukee Public Museum in the Northern Plains*. Milwaukee Public Museum, Wisconsin.

Crow Indian Reservation

Montana

Collections Summary

BIA Area Office Responsibility: Billings

Volume of Artifact Collections: 15.7 ft³ (Museum of the Rockies); 1.4 ft³ (GCM Services); 2.7 ft³ (University of North Dakota); 19.8 ft³ total

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 1 linear foot (12 linear inches; Museum of the Rockies); < 1 linear foot (8.75 linear inches; GCM Services); 1.7 linear feet total (20.75 linear inches)

Compliance Status: All associated records require complete rehabilitation to comply with

federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Locations of Collections: Museum of the Rockies, Bozeman, Montana; Geological Cultural Management Services, Butte, Montana; and the University of North Dakota, Grand Forks

Collections Located: Wolf Mountain (East Crow) Survey, Pryor-St. Xavier (West Crow) Survey, Indian Creek Coal Permit Area Survey, Shell-Youngs Creek Survey, 45ST651, and 24BH266

The Fort Laramie Treaty of 1851 originally established the Crow Indian Reservation (over 38,500,000 acres of land) in southeastern Montana. By 1905, however, the reservation had been reduced to 2,285,000 acres, and boundaries have remained fairly constant since the Hardin Cession of 1937. In the 1950s, the Crow were forced to sell the rights to Bighorn Canyon in order to construct the Yellowtail Dam and Reservoir. Today, the Crow are considered a distinct cultural people with a majority of members still speaking their traditional language (Frey 1994).

Considerable archaeological work was conducted on the Crow Indian Reservation prior to October 31, 1979. In 1941, Nels C. Nelson of the American Museum of Natural History conducted archaeological investigations on the res-

ervation. According to Nelson (1943), the collection is comprised of approximately 7,000 objects, including lithics, ceramics, faunal remains, shell, and metal. The collection is stored at the American Museum of Natural History, New York.

A number of projects commenced after Nelson's survey. The Billings Archaeological Society was active on the reservation in the 1960s and 1970s. The locations and sizes of any Billings Archaeological Society collections were not determined by St. Louis District personnel. In addition, major collections were acquired during the construction of Yellowtail Dam and Reservoir in the 1950s and 1960s, and these collections are likely, but not confirmed to be, stored at the Smithsonian Institution.

Dr. Les Davis of Montana State University conducted surveys on the Crow Indian Reservation in the 1970s. The projects included the Pryor-St. Xavier (West Crow) Survey, the Wolf Mountain (East Crow) Survey, and the Indian Creek Coal Permit Area Survey. These collections are located at the Museum of the Rockies (MOR). Additional large surveys were conducted in the 1970s by Dr. Larry Loendorf, then of the University of North Dakota, on lands adjacent to the Big Horn Canyon Recreation Area. These materials are housed at the University of North Dakota (UND).

Staff from the Mineral Research Center, Butte, also conducted research on the reservation in the 1970s. Drs. Lynn and Dale Fredlund were the principal investigators. At the present time Dr. Lynn Fredlund is president of Geological Cultural Management Services (GCM Services), which houses a small collection of materials from the Shell-Youngs Creek Survey on the reservation. In addition, GCM conducted a large excavation of Benson's Butte, 24BH1726, which resulted in more than 45 boxes of artifacts and associated documentation. However, Benson's Butte was located on private property within the boundaries of the reservation at the time of excavation.

The University of Montana may have also conducted archaeological research on the Crow Indian Reservation as part of a highway salvage program (I-90) in the 1970s. However, telephone contact with Dr. Tom Foor of the University did not reveal the location of these collections. It is possible that the University of Montana may not recognize the collections as having come from reservation lands.

Information in this summary, and for other Montana Indian Reservations, was gathered during site-file searches and research by St. Louis District personnel, with the help of a document entitled, "A Proposal to Inventory Artifact Collections from Indian Lands in Montana Administered by the Billings Area Office, Bureau of Indian Affairs," with no author or date listed, that was observed in the files at the BIA Billings Area Office. St. Louis District personnel conducted a file search at the Billings Area Office in June 1995. In addition, Dr. Marvin Keller provided important information.

Repository 1: Museum of the Rockies, Montana State University

Date of Visit: July 13, 1995

Points of Contact: Dr. Leslie Davis, Curator;
Connie Estep, Registrar; Frank Harriman,
Construction Specialist

BIA Collections Present: Crow Indian Reservation collections from the Wolf Mountain (East Crow) Survey, Pryor-St. Xavier (West Crow) Survey, and Indian Creek Coal Permit Area Survey.

MOR was founded in 1957 as the Montana State College Historical Museum. It is now closely aligned with Montana State University. Research fields include northern Rocky Mountain regional history, prehistory, and natural history. Several types of collections are managed; these include archaeological, ethnological, geological, historical, paleontological, photographic, fine arts, and textiles collections.

MOR is curating 15.7 ft³ of artifacts and 1 linear foot of associated documentation from archaeological investigations on the Crow Indian Reservation, Montana. The artifact collection primarily consists of prehistoric materials, with some artifacts from historical-period contexts. Of the total, prehistoric material classes include lithics (90%), ceramics (1%), and faunal remains (5%), whereas historical-period material classes include ceramics (1%), glass (1%), and metal (2%) (Table 8). Two survey projects comprise the collection, the Wolf Mountain (East Crow) Survey and the Pryor-St. Xavier (West Crow) Survey, and many sites are represented (see project reports).

Since 1972, MOR has been located in a permanent location adjacent to the Montana State University campus (Figure 18). The most recent renovations and additions occurred in 1989, and its size was tripled to 96,000 ft². The building contains galleries and exhibit halls, storage areas, a planetarium, laboratories, an auditorium, classrooms, meeting rooms, and offices.

Table 8.
Summary, by Volume, of Material Classes
Present in Crow Indian Reservation
Collections at the MOR

Material Class	%
Prehistoric	
Lithics	90
Ceramics	1
Faunal remains	5
Historical-period	
Ceramics	1
Glass	1
Metal	2
Total	100

Assessment

Structural Adequacy

The structure housing MOR has of two floors, one aboveground and one below. A few galleries are located at higher levels on the upper floor. The foundation is concrete, while the exterior walls are concrete block and brick. The roof is constructed of EPDM rubber membrane and is original to the 1989 addition; older sections of

the repository were renovated as well. The roof and foundation are solid; no cracks or leaks have been reported. There are multiple exterior windows and doors, particularly at the front entrances. The window frames are aluminum, and are equipped with shades or ultraviolet surface tinting.

The collections storage area measures approximately 3,500 ft² and has a concrete foundation and a concrete-slab ceiling. Interior walls are concrete block and plasterboard. There are no windows, and only one metal-panel door, to the repository. There is one interior, metal-panel door leading to another collections storage area. Archaeological collections occupy approximately 20 percent (700 ft²) of the collections storage area, most of which houses paleontological collections. The storage area, including both archaeological and paleontological collections, is filled to approximately 100 percent capacity (Figure 19).

Environmental Controls

MOR is equipped with an HVAC system, with dust filters, for environmental control. Humidity is monitored through the use of hygrothermographs, which are located in the galleries. Humidity levels are regularly checked by the registrar. University custodial staff regularly maintain and clean the repository.

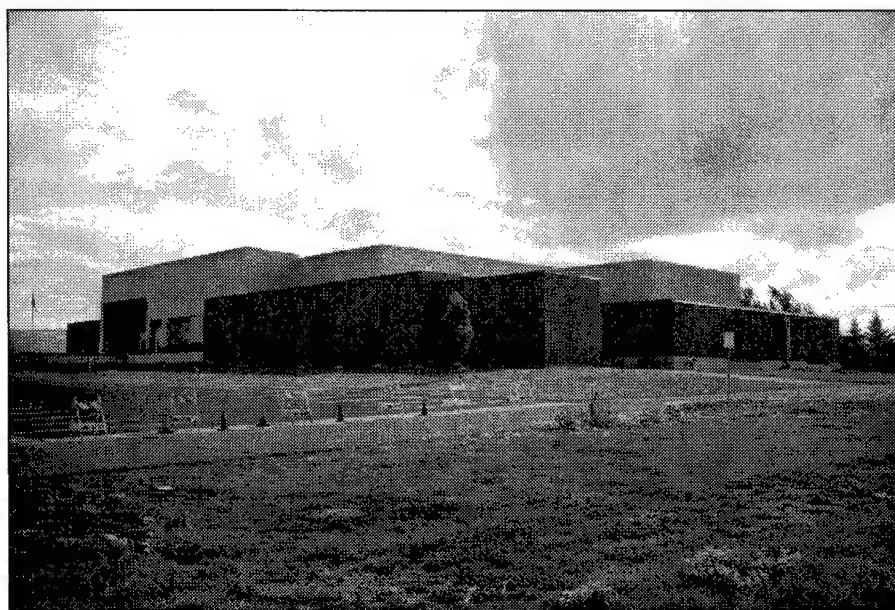


Figure 18. Exterior view of the MOR in Bozeman, Montana.



Figure 19. General view of the collections storage area in the MOR that houses both paleontological and archaeological collections.

The environment in the collections storage area is controlled by the repository's HVAC system. Humidity in the collections storage area is monitored by a hygrothermograph microprocessor located within the HVAC equipment. Temperature and humidity levels, if necessary, can be controlled from the other side of campus by means of the microprocessor. Lighting provided by fluorescent tubes that are not equipped with ultraviolet filters. Maintenance of the collections storage area is performed by the registrar and other curatorial staff on an as-needed basis.

Pest Management

MOR has an integrated pest-management program that includes monitoring and control. Sticky traps are utilized for monitoring, and controlling takes place on both a regular and an

as-needed basis. Regular control consists of annual spraying by a contracted firm. Pest management is the responsibility of the registrar.

Security

Security measures for museum consist of an intrusion alarm wired into local and campus police, a 24-hour in-house guard, motion detectors, and key locks. Access to many areas of the museum, including collections storage areas, is tightly controlled through the use of employee identification badges and an electronic door-lock system accessed by magnetic security cards. There are three levels of clearance for employees, and some cards function only from 8:00 a.m. to 5:00 p.m. The door to the collections storage area is equipped with the card-access system. If a door stays open for more than a specified amount of time (approximately 1 minute) security guards are quick to respond.

Fire Detection and Suppression

MOR utilizes manual fire alarms, smoke detectors, and heat sensors, wired into a private monitoring firm, for fire detection. Fire suppression is provided for by a sprinkler system, a halon system, fire-rated doors, fire-code-plasterboard interior walls, and multiple fire extinguishers. Fire extinguishers are inspected on a monthly basis. Halon is present in the collections storage areas, particularly in the art, photographic archives, and history areas, all of which contain materials easily damaged by water. The sprinkler in the collections storage areas is a dry-pipe system with release valves. Water only fills the pipe and engages if the system is activated by fire. Thus, the possibility of a water pipe bursting is only present during a fire; the sprinkler system is not likely to cause damage to the collections underneath.

Artifact Storage

Storage Units

Storage units for the archaeological collections consist of baked-enamel, metal shelves, wooden pallets and cabinets, and the floor. The archaeological section of the collections storage area is overfilled, and it is not clear that an organization system exists. Prior to the assessment team's

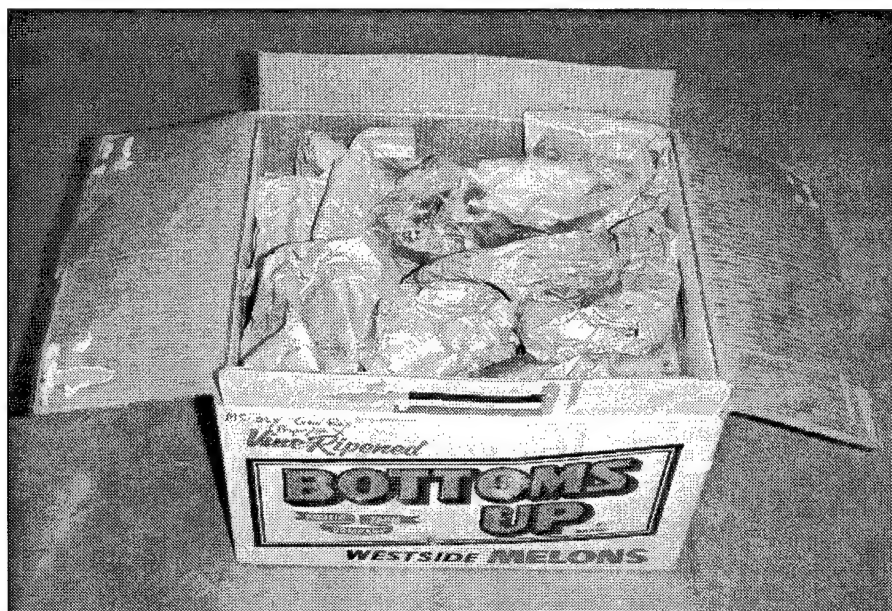


Figure 20. One primary container holding collections from the Crow Indian Reservation is an acidic-cardboard produce box containing plastic and acidic-paper bag secondary containers.

visit, the MOR staff had removed all artifacts and associated documentation from the storage units for the convenience of the team. It was not clear where all primary containers had been stored, but it is likely that most were located on the baked-enamel, metal shelves. Table 8 summarizes the types and percentages of archaeological materials present in the Crow Indian Reservation collections curated at MOR.

Primary Containers

Crow Indian Reservation archaeological collections are stored in 15 acidic-cardboard boxes, measuring a total of 15.7 ft³. Fourteen of the boxes have folded-flap lids, and one has a telescoping lid. The primary containers are of various sizes, ranging from 0.5 ft³ to 1.6 ft³ each in volume (Figure 20). Several of the larger boxes are of heavy construction and have wax-coated interiors. All of the boxes are old, and many exhibit compression damage and tears. Boxes are labeled directly in marker; label information consists of project name.

Secondary Containers

There are a variety of secondary container types, but most of the collection is contained in paper bags (Table 9; see Figure 20). Secondary containers are inconsistently labeled. Many,

Table 9.
Summary, by Volume, of Secondary Containers Used for Crow Indian Reservation Collections at the MOR

Container Type	%
Loose	12
Newspaper	1
Paper bags	60
Plastic bags	16
Plastic, zip-lock bags	11
Total	100

including paper bags, plastic bags, and plastic, zip-lock bags, are labeled directly in pen or marker, with information consisting of site number or site name. A substantial portion of these secondary containers are not labeled. A small number of plastic and paper bags have interior, acidic-paper tags, with site number directly applied in pen or marker. Many of the secondary containers are damaged or worn because of their ages. Some plastic bags are punctured, and some paper bags are torn.

There are multiple containers within the plastic bags, plastic, zip-lock bags, and paper bags. These smallest containers generally consist of

additional bags of the same type, although there are some small manila envelopes and plastic medicine and film vials. Labels consist of a site number recorded directly in pen or marker or acidic-paper tags with site number and provenience listed in pen.

Laboratory Processing and Labeling

All artifacts have been properly cleaned. However, only approximately 25 percent have been properly labeled. Labels consist of ink, directly on the artifact or on white correction fluid, sealed with polish. Label information consists of site number and, less frequently, catalog number.

Human Skeletal Remains

MOR is not curating any human skeletal remains or associated funerary objects from Indian reservations.

Records Storage

Associated documentation is stored both loose and in notebook binders within standard-size file cabinets. File cabinets are located in the fine arts storage room, an annex of the main collections storage area. Only one door from the main collections storage area leads into the fine arts storage room, and the door to the latter room has a separate security-card-entry system.

Paper Records

Ten linear inches of paper records, including site forms and artifact-specimen logs, are curated at MOR. Secondary containers consist of manila folders and vinyl-and-cloth binders. Manila folders are labeled in pen with project name. There are four binders, three vinyl and one cloth, all of which have exterior, adhesive tags. Label information, which is typed or written in marker, consists of site numbers or project name. Containers are dirty and dusty, and some records are discolored. All paper records are originals.

Photographic Records

MOR is currently curating less than 1 linear inch of photographic records, which consist of nonlabeled black-and-white prints, from the Crow Indian Reservation. Photographs are stored with the paper records.

Project Reports

Two linear inches of project reports from archaeological investigations on the Crow Indian Reservation are stored at the museum. Reports are stored with the paper records.

Collections-Management Standards

Registration Procedures

Accession Files. Not all materials have been accessioned. However, they will be in the near future. There is a many-years backlog; when Dr. Davis came to work for the Museum on a full-time basis in 1990, he brought 25 years of artifacts with him from the Anthropology Department at the university. The system is not currently set up for materials to go straight to the registrar. They are first processed, data are entered, and only then are they sent to the registrar.

Location Identification. The locations of materials are not necessarily identified in the accession files. However, as backlogs are addressed, locations are properly listed. As the records are updated there will be three categories of location information: collection type (e.g., prehistoric or historical-period), laboratory, and shelf location.

Cross-Indexed Files. Files are not cross-indexed. As the accession records proceed, accession number and repository location will be keyed together.

Published Guide to Collections. No guide to the collections has been published. However, there are published museum reports.

Site-Record Administration. A trinomial site-numbering system is utilized for site identification.

Computerized Database Management. MOR uses the ARGUS computer-database system. Backups are created daily on tape. There are also weekly and monthly backups, which are written over. Quarterly tapes are also stored, with the recent backups stored off-site and older (monthly) backups stored in a fire-resistant room. The ARGUS database is attached to a network, the main server for which is located at the museum. There are multiple levels of security, with the lowest classification for data-entry technicians and visiting researchers. Higher-security-

level entry is provided for two curators and one registrar.

Written Policies and Procedures

Minimum Standards for Acceptance. No formal minimum standards for the acceptance of archaeological collections are in place. The museum operates primarily on curatorial judgement; the curator makes the ultimate decision regarding acceptance.

Curation Policy. No formal curation policy is in place. There are informal policies, routines, and processes. The museum has had a registrar for only the past 2–3 years. There is a general collections-management policy that briefly addresses acquisitions, loans, transfers, and deaccessions.

Records-Management Policy. There is a formal records-management policy. However, it is not detailed to include the specific treatment of paper records, maps, reports, and photographic records.

Field-Curation Procedures. No formal field-curation guidelines have been created.

Loan Policy. Loan procedures are briefly outlined in the collections-management policy. Loans are made at the discretion of the appropriate curator, and are generally granted only to institutions.

Deaccessioning Policy. There is a brief description of the deaccessioning policy within the collections-management policy. Deaccessions require the approval of the board of trustees.

Inventory Policy. There is no formal inventory policy.

Latest Collection Inventory. The archaeological collections have never been completely inventoried. The 25-year backlog of artifacts is being worked through, but this has not yet been completed.

Curation Personnel

Dr. Leslie Davis is the curator of archaeology and ethnology for approximately 75 percent of his time. There are four other archaeology staff members, including two full-time professionals (one with a Ph.D. in geoarchaeology and one

historical archaeologist who is ABD), and two part-time, work-study students every year. Staff conduct fieldwork, research, publication, exhibits production, and curatorial activities. Additionally, there is a registrar responsible for all museum collections.

Curation Financing

Curation is financed through an academic budget provided by Montana State University (20%) and by private museum funds (80%), which consist of state monies and private endowments. In addition, project-specific funds from external sources help support curation activities. The curator believes that curation financing is inadequate.

Access to Collections

Access to collections is tightly controlled by the curator. Other archaeology staff generally have access without specific permission, but no other museum staff have this access. For outside researchers to be granted access a written request must be approved by the curator and, occasionally, by a collections committee.

Future Plans

MOR has entered into a cooperative agreement with a federal agency to construct a curation repository for federal archaeological collections. The repository will be located on university property. The private sector bought the structure, with the state-owned endowment funds research program. The repository will be state-of-the-art in collections processing, temporary storage, and long-term storage. It will have proper environmental controls, pest management, fire-safety, and security measures.

Comments

1. MOR operates an HVAC system for environmental control, and monitors humidity with microprocessor-equipped hygrothermographs.
2. Security measures, which range from key locks to electronic entry and magnetic-card access, meet federal standards for the protection of archaeological collections.

3. Fire-detection and -suppression measures, which consist primarily of fire extinguishers, manual alarms, halon, and sprinkler systems, meet federal standards for the safeguarding of archaeological collections.
4. MOR has an integrated pest-management program that includes both monitoring and controlling of pest infestations.
5. There is a curator for the archaeological collections (an 80%-time position).
6. Artifacts are housed in a variety of acidic primary containers and nonarchival-quality secondary containers. Provenience is rarely recorded on primary or secondary containers.
7. Records are stored in manila envelopes or in vinyl or cloth binders.

Recommendations

1. Rebox and rebag artifacts in acid-free primary and secondary containers. Use secondary containers that consist of 4-or 6-mil, polyethylene, zip-lock bags. Archivaly label primary and secondary containers with site numbers, project name, accession numbers, and provenience.
2. Remove records from manila envelopes and binders. Place them, separate from artifacts, in acid-free folders within acid-free primary containers. Archivaly process documents and secondary containers. Label these with document type and site number. Produce additional copies of associated documentation on acid-free paper and store at a separate, secure location.

Repository 2: GCM Services

Date of Visit: July 18, 1995

Point of Contact: Dr. Lynn Fredlund, President

BIA Collections Present: Crow Indian Reservation collections from the Shell-Youngs Creek Survey and site 45ST651

GCM, founded in 1982, is a contracting firm in Butte, Montana, that specializes in archaeology and historical research. However, the founders, Lynn and Dale Fredlund, still hold some collections (e.g., BIA) recovered when they were associated with Montana Tech, also located in Butte. Current BIA holdings at GCM include 1.4 ft³ of archaeological artifacts from the Crow Indian Reservation and less than 1 linear foot (8.75 linear inches) of associated documentation.

Of the 54 ft³ of artifacts in total evaluated by the assessment team, only 1.4 ft³ (from the Shell-Youngs Creek Site on the Crow Indian Reservation) was found to be pertinent to the BIA project. The remainder of the artifacts (Benson's Butte Site, 24BH1726) was excavated from private land within the boundary of the Crow Indian Reservation.

GCM is located on the second floor of the historic Milwaukee Road Terminal Building, which is listed on the National Register of Historic Places. Office and laboratory space are leased from television station KXLF, which occupies the first floor. The collections storage area is located in an old warehouse section of the building (Figure 21) and is considered to be temporary. Although it is physically connected to the main structure, entrance to GCM can only be gained from the exterior through garage doors in the rear. The BIA collection is currently stored in one room on the second floor of the warehouse.

Assessment

Structural Adequacy

The Milwaukee Road Terminal Building was originally built, in 1912, to function as a train depot. The structure encompasses approximately 13,000 ft² of floor space, of which the GCM offices occupy an estimated 2,400 ft². The foundation consists of concrete, while exterior walls are red brick. The roof over the office portion of the structure is composed of clay tile over wooden eaves. The roof over the warehouse section consists of tar and asphalt. The structure is solid, but some leakage has been noted (Figure 22).

The structure has two floors aboveground, with a clock tower on the roof. There are multiple

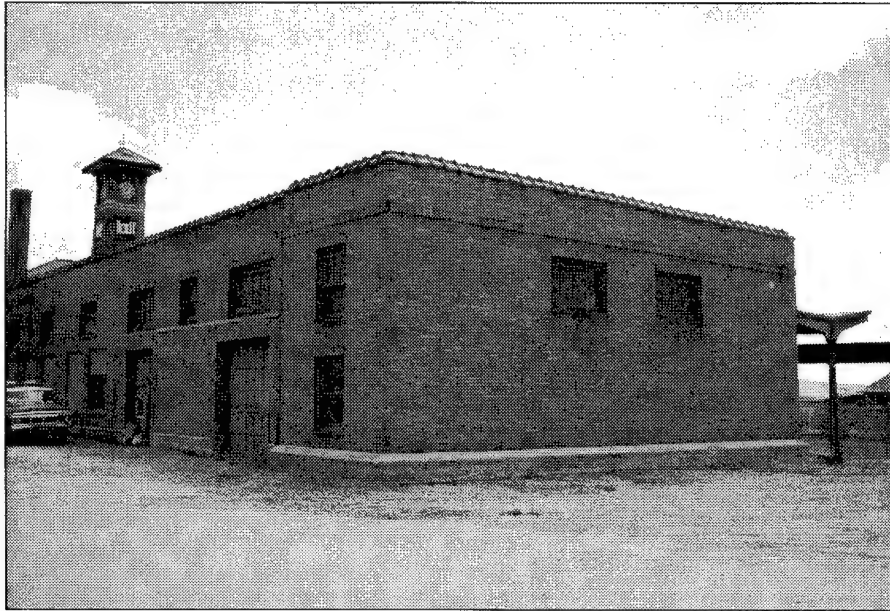


Figure 21. Exterior view of the rear of building housing the BIA collections storage area at GCM Services, Butte, Montana.



Figure 22. Dried tar (leaked from the tar and asphalt roof above) hanging down from the ceiling in the collections storage area at GCM Services.

external windows that are equipped with shades. The wooden window frames are original to the structure and may occasionally leak air or water. Renovations have occurred in the past.

BIA artifacts and associated documentation are temporarily stored in a room that is located

on the second floor of the warehouse section, at the rear of the main structure. The collections storage area measures approximately 200 ft². It contains one large, north-facing, exterior window and two smaller interior windows facing east and south. The floor and ceiling consist

of plain wooden planks; those on the ceiling are painted. The interior walls are a combination of painted wooden planks (on the side containing the entrance door) and bricks (the remaining three sides). The single interior door is wood panel, and is not equipped with a lock. The room currently houses archaeological materials, associated documentation (both boxed), and miscellaneous equipment. It is filled to approximately 80-percent capacity.

Environmental Controls

The main structure housing the GCM offices is heated by a radiator and a boiler system, but it is not air-conditioned. The environment in the collections storage room is not controlled; radiators are present in the room, but do not function. Outside air freely enters the room through large gaps in the broken exterior window. Although the window has no shade, the glass is opaque. Dried strips of tar, which have seeped from the roof, hang from the ceiling in one corner. The room is very dusty.

Pest Management

“D-CON” spray is utilized for pest control when a problem is reported, but problems are rarely noted. Many flies were buzzing freely inside the room, due to the broken exterior window.

Security

The only security measure currently in place for the collections is the garage door at ground level, which is locked with a key. The interior door to the collections storage room is not equipped with a lock. The exterior, chicken-wire-reinforced window has metal bars, but its effectiveness is questionable given the gaping holes in the glass.

Fire Detection and Suppression

The main repository has fire extinguishers and a sprinkler system. There are no similar measures in the collections storage area.

Artifact Storage

Storage Units

Numerous boxes containing archaeological materials and associated documentation from projects are stacked on the wooden floor and on top of one another against the walls of the room. The one primary container that houses both BIA artifacts and associated documentation is situated in one such stack of boxes in the collections storage area.

Primary Containers

The acidic-cardboard box has a telescoping lid and measures 1.4 ft³. It is directly labeled, in marker, with the project name (Figure 23).

Secondary Containers

There are two plastic bags containing the few lithic artifacts in the box, along with associated documentation. The bags are labeled directly, in marker, with project name.

Laboratory Processing and Labeling

All artifacts have been washed, but none has been directly labeled.

Human Skeletal Remains

There are no human skeletal remains in the BIA collections stored at GCM.

Records Storage

The one box (see Figure 23) containing BIA artifacts and associated documentation is located, on the wooden floor, against one wall. Documentation is stored loose with the artifacts in the box. Secondary containers, when present, consist of manila envelopes.

Paper Records

Paper records in the BIA collection total 8.25 linear inches.

Photographic Records

Photographic records in the BIA collection total 0.25 linear inches.

Project Reports

The one project report in the BIA collection measures 0.25 linear inches.

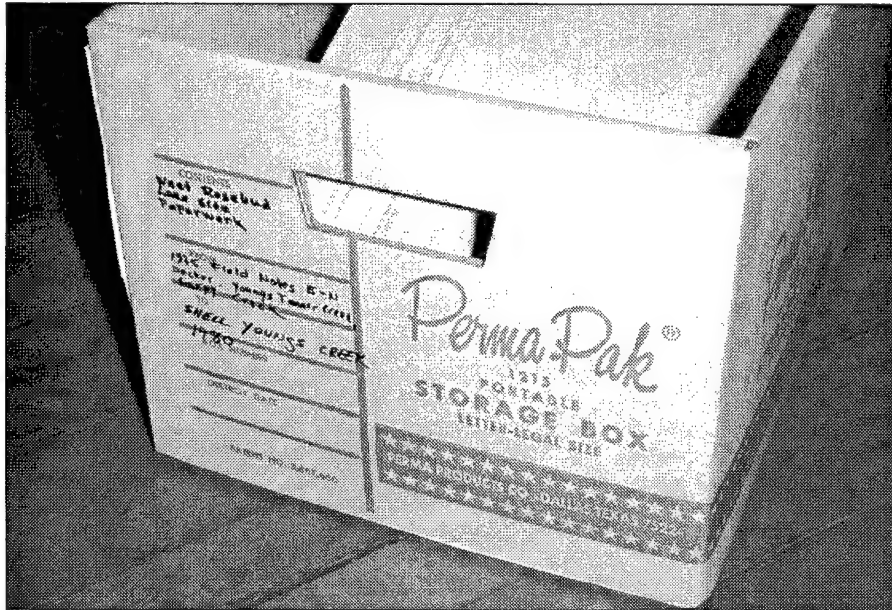


Figure 23. Close-up on the exterior label of the sole box containing both records and artifacts from the Crow Indian Reservation being stored at GCM Services.

Collections-Management Standards

GCM is a private consulting firm and is not considered a long-term curation repository. Therefore, collections-management standards were not evaluated.

Curation Personnel

Dr. Lynn Fredlund is GCM's president and is responsible for all temporary curation activities.

Curation Financing

Curation is financed on a project-by-project basis. However, no funds have ever been allocated for curating the BIA collections currently being held at GCM.

Access to Collections

Access to the collections is granted at the discretion of Dr. Fredlund.

Future Plans

GCM is not a long-term curation repository and, therefore, has no future curation plans.

Comments

1. The current collections storage area, though considered to be temporary, is wholly inadequate.

No functional environmental controls or fire-detection or -suppression devices are present. Security and pest-management measures are inadequate.

2. The one box containing BIA artifacts and associated records is composed of acidic cardboard and is sitting directly on the dusty wooden floor.

Recommendations

1. Remove collections from the collections storage area and place them in the laboratory area of the main repository, where basic security, fire safety, heating, pest management, and maintenance exist.

2. Rebox and rebag artifacts in acid-free cardboard boxes and 4- and 6-mil, polyethylene, zip-lock bags.

3. Place associated documentation in archival-quality, acid-free folders and place the folders in a box separate from the artifacts.

4. Place photographs in archival-quality, polyethylene sleeves.

5. Make duplicates of documentation on acid-free paper and store at a separate, secure location.

Repository 3: University of North Dakota

Date of Visit: December 4, 1995

Point of Contact: Dr. Dennis Toom, Professor of Anthropology and Collections Manager

BIA Collections Present: Crow Indian Reservation collection from site 24BH266

The anthropology department, UND, Grand Forks, has been actively conducting archaeological research on the northern Great Plains for many years. UND is currently curating 2.7 ft³ of artifacts recovered on the Crow Indian Reservation; no associated documentation is stored at the university. The artifact collection consists primarily of prehistoric lithics (99%), with some faunal remains (1%). Some collections are curated on a long-term basis at UND, but their goal is to be only a temporary-holding repository, with most collections being transferred to the North Dakota State Historical Society for long-term curation.

The Department of Anthropology is located in Babcock Hall on the UND campus. Babcock Hall is between 80 and 90 years old, and currently houses classrooms and laboratories for anthropological, ceramic, and industrial technologies. The repository encompasses 14,000 ft², and includes areas for artifact holding, washing, processing, storage, and study. Also present are areas for records study and storage, general and utilities storage, and offices. There are three floors aboveground and one below.

Assessment

Structural Adequacy

The exterior of Babcock Hall is constructed primarily of brick, which composes both the foundation and the exterior walls. The roof is constructed of built-up asphalt and shingles.

Parts of the roof have been renovated, with the last modifications occurring approximately five years ago. Although the structure is solid, there are leaks through the foundation. There are multiple exterior windows, all with wooden frames. Most windows are equipped with shades. There have been multiple interior renovations of the structure through the years.

The collections storage area has a concrete floor, while the interior walls and ceiling are plaster. There is a small number of windows, each with a wooden frame and a shade. There is one wood-panel door to the interior of the repository, and one metal-panel, exterior door. The collections storage area encompasses 3,000 ft², and is filled to approximately 90-percent capacity with archaeological collections.

Environmental Controls

Babcock Hall is equipped with a heating system, but it is not air-conditioned. However, there is a filtered fresh-air system. Humidity is neither monitored nor controlled. The repository is maintained and cleaned weekly by university staff. Lighting is provided by fluorescent tubes that are not equipped with ultraviolet filters.

Pest Management

No integrated pest-management program is in place. Cockroaches are a periodic problem, and are controlled by a contracted pest-control company on an as-needed and yearly basis through the use of sprays and pesticide bombs.

Security

Security for Babcock Hall consists of dead bolt and key locks on all exterior doors and simple locks on all exterior windows. In addition, campus police conduct patrols. There have been past episodes of unauthorized entry through the steam tunnels utilized for heating, but interior doors have since been padlocked. The doors to the collections storage area are equipped with both key and dead bolt locks.

Fire Detection and Suppression

Fire-detection systems consist of smoke detectors, heat sensors, and manual fire alarms wired into the local fire department. Fire suppression

is provided by fire doors and fire extinguishers located throughout the repository. There are four fire extinguishers located in the collections storage area, one in each room.

Artifact Storage

Storage Units

Storage units for artifacts consist of wooden shelves that measure 3 × 2 feet (w × d).

Primary Containers

Artifacts are stored in two acidic-cardboard boxes with folding-flap lids. Each box has a volume of 1.3 ft³. Label information consists of site numbers and reservation name, written directly on the box in marker.

Secondary Containers

Secondary containers consist entirely of paper bags. Label information consists of site number written directly in pen or pencil on the bags. Date or contents are sometimes included in the label information.

Laboratory Processing and Labeling

All artifacts have been cleaned, labeled, and sorted. Label information is recorded, in ink, directly on the artifacts.

Human Skeletal Remains

UND is not curating any human skeletal remains recovered from Indian reservations in the project area.

Records Storage

No documentation associated with archaeological investigations on the Crow Indian Reservation is curated at UND.

Collections-Management Standards

Registration Procedures

Accession Files. An attempt is made to accession collections when they are acquired.

Location Identification. The location of the collection is identified within the accession files by building and room number.

Cross-Indexed Files. Files are not cross-indexed. A computer database is in place, but the system is not completed.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A trinomial site-numbering system is utilized for site identification.

Computerized Database Management. A computerized database-management system is currently being developed.

Written Policies and Procedures

Minimum Standards for Acceptance. There are no minimum standards for the acceptance of archaeological collections.

Curation Policy. No formal standards or guidelines for the curation of artifacts have been created.

Records-Management Policy. There are no formal standards or guidelines for the curation of archaeological documentation.

Field-Curation Procedures. No formal field-curation guidelines have been written.

Loan Policy. There are no formal procedures for the loan of archaeological materials.

Deaccessioning Policy. No formal deaccessioning policy is in place.

Inventory Policy. There is no formal inventory policy.

Latest Collection Inventory. Collections are inventoried after leaving the field.

Curation Personnel

UND does not have a full-time curator. Dr. Dennis Toom is the part-time collections manager, responsible for organizing and storing archaeological materials.

Curation Financing

Curation of archaeological collections is financed by writing monies for curation supplies into fieldwork budgets. Staff feel that funding is inadequate for the university's goal of temporary curation of artifacts and associated documentation.

Access to Collections

Access to the collections is controlled by Dr. Toom. UND staff and students are generally the only individuals who access the collections.

Future Plans

There are plans for the curation of archaeological materials, but they are accorded a lower priority than recovery, analysis, and teaching. Curation is viewed as a temporary duty of the university.

Comments

1. The foundation of Babcock Hall is aging, and water occasionally leaks through weak points.
2. There is no air-conditioning system in Babcock Hall, but there is a fresh-air system.
3. There is no method of humidity monitoring or control.
4. No integrated pest-management program is in place.
5. Security measures for Babcock Hall consist of key and dead bolt locks on all doors.
6. There is no fire-suppression system, other than fire extinguishers, in the repository.
7. Primary containers for artifacts are acidic-cardboard boxes, while acidic-paper bags serve as secondary containers.
8. No documentation associated with the artifact collections stored at UND is present.

Recommendations

1. Inspect the building foundation and repair cracks and leaks.
2. Install an HVAC system. If not feasible, monitor humidity with a hygrothermograph or sling psychrometer and control humidity with a dehumidifier.

3. Implement an integrated pest-management program that includes both monitoring and controlling.

4. Install an intrusion-alarm system on all exterior doors and windows and on entrances to the collections storage area.

5. Install a sprinkler system for fire suppression. If not possible, install an automatic fire-detection system that is wired into the local fire department.

6. Remove artifacts from acidic-paper bags and acidic-cardboard boxes, and place them in archival-quality, zip-lock, plastic bags and acid-free cardboard boxes. Insert acid-free paper labels into each secondary container.

7. Locate documentation relating to archaeological investigations on the Crow Indian Reservation; bring this associated documentation together with the artifact collection. Duplicate records onto acid-free paper and store in acid-free folders placed in acid-free cardboard boxes. Store copies of associated documentation at a separate, secure location.

Reports Relating to Archaeological Investigations on Crow Indian Reservation

Bass, W. M., and J. C. Barlow

1964 A Human Skeleton from the Pryor Creek Burial (24YL404), Yellowstone County, Montana. *Plains Anthropologist* 9(23):29-36.

Clark, Gerald, and Lynn Fredlund

1975 *Environmental Baseline Studies for Crow Indian Coal Leases*. Mineral Research Center, Butte, Montana. Submitted to Wirth Associates.

Conner, Stuart

n.d. *Tubular Pipes in Buffalo Jumps*. Billings Archaeological Society, Billings, Montana.

- 1964 *The Grapevine Creek Buffalo Jumps*. Billings Archaeological Society, Billings, Montana.
- Davis, Leslie B.
- 1973 *The East Crow Reservation Wolf-Rosebud Mountains Project 1973: A Preliminary Archaeological Sites Inventory, Evaluation, and Further Work Recommendations*. Montana State University, Bozeman.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- 1974 *The Pryor-St. Xavier Secondary Road Development Corridor: Archaeological, Paleontological and Historical Aspects*. Montana State University, Bozeman. Submitted to the Billings Area office, Bureau of Indian Affairs.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- 1975 *The Indian Creek Coal Permit Area, Crow Indian Reservation, Montana: Archaeological, Ethnohistorical and Historical Heritage Baselines*. Montana State University, Bozeman. Submitted to the Gulf Mineral Resources Company.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- Environmental Consultants
- 1978 *Archaeology, History, Paleontology: Spring Creek Project*. Northern Energy Resources.
- Fredlund, Lynn B.
- 1981 *Inventory and Assessment of Cultural Resources on Youngs Creek Mine Area*. Cultural Resources Division, Mineral Research Center, Butte, Montana. Submitted to the Shell Oil Company, Houston, Texas.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- Fredlund, Lynn B., and Dale E. Fredlund
- 1973 *1972 Archaeological Reconnaissance of Shell Oil Company Coal Lands, Big Horn County, Montana*. Department of Anthropology, Statewide Archaeology Survey, University of Montana.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- Good, Kent
- 1975 *The Results of the Archaeological Survey on Crow Tribal Lands, Bighorn Canyon National Recreation Area*. University of North Dakota, Grand Forks. Submitted to the Midwest Archeological Center, USDI National Park Service, Lincoln, Nebraska.
- Historical Research Associates
- 1979 *Historical and Architectural Assessment of a Cabin Site in SW 1/4, NE 1/4, Section 7, T9S, R36E*. Historical Research Associates, Missoula, Montana. Submitted to the Montana Department of Highways.
- Loendorf, Lawrence L.
- 1974 *Archaeological Survey in the Pryor Mountain Bighorn Canyon Area, 1970 Field Season*. University of Missouri, Columbia. Submitted to the USDI National Park Service and the USDA Forest Service.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- 1974 *The Results of the Archaeological Survey in the Pryor Mountain Bighorn Canyon Area, 1971 Field Season*. University of North Dakota, Grand Forks. Submitted to the USDI National Park Service and the USDA Forest Service.
- Note:* Relates directly to the archaeological collections evaluated by St. Louis District personnel.
- Mineral Research Center
- 1977 *Cultural Resource Inventory Oil and Gas Exploration*. Mineral Research Center, Butte, Montana. Submitted to Helmerich-Payne.
- Nelson, Nels C.
- 1943 *Contribution to Montana Archaeology*. *American Antiquity* 9(2):162-169.

Scott, Gary, and Alan Carmichael

- 1975 *The Fort Smith Burial*. Submitted to the National Park Service. University of North Dakota, Grand Forks.

Smith, Charline

- 1977 *Highway Salvage Program: 1977 Season*. Submitted to the Montana Highway Commission.

Van West, C. R.

- 1979 *Data Base and Assessment of Archeological Resources in Bighorn Canyon National Recreation Area*. Midwest Archeological Center, USDI National Park Service, Lincoln, Nebraska.

Warm Springs Indian Reservation

Oregon

Collections Summary

BIA Area Office Responsibility: Portland

Volume of Artifact Collections: 2.1 ft³

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: < 1 linear foot (4 linear inches)

Compliance Status: All associated records require complete rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None from Indian reservations in the project area. It is possible that there are human skeletal remains from the Klamath Indian Reservation housed at the Oregon State Museum of Anthropology, but this has not been confirmed.

Location of Collections: Oregon State Museum of Anthropology, Eugene

Collections Identified: Round Butte Site (35JE1)

The 1855 Treaty with the tribes of middle Oregon established the nearly 640,000-acre Confederated Tribes of the Warm Springs Indian Reservation. The reservation is located in an area from the crest of the Cascade Mountains east to the Deschutes River. Historically, tribes with membership in the confederation included four bands of the Warm Springs Tribe, and three bands of the Wascos. Northern Paiutes brought to the reservation in 1879 as prisoners of war compose a third group in the Confederation.

There was no major archaeological work conducted on the Warm Springs Indian Reservation prior to October 31, 1979. One small collection from site 36JE1 does exist, however, and is curated at the Oregon State Museum of Anthropology (OSMA), Eugene.

Oregon State Museum of Anthropology

Date of Visit: December 5, 1995

Point of Contact: Dr. Pam Endzweig, Collections Manager

BIA Collections Present: Warm Springs Indian Reservation collection from the Round Butte Site (36JE1; accession nos. 100JC and 229).

OSMA is the state repository for archaeological materials (Figure 24). OSMA is a division of the Oregon Museum of Natural History, which is part of (and located on the campus of) the



Figure 24. Exterior view of the OSMA in Eugene, Oregon.

University of Oregon, Eugene. Approximately 2 ft³ of artifacts and 4 linear inches of associated documentation from archaeological investigations on the Warm Springs Indian Reservation are curated at OSMA. The artifact collection consists solely of prehistoric materials. Material classes include lithics (33%), faunal remains (36%), and soil (31%) (Table 10).

The structure housing OSMA was constructed in 1987 for the purpose of curating and exhibiting materials. The repository contains areas for artifact holding, washing, processing, and storage. Also present are areas for offices, exhibition space, and storage for documentation, special archaeological materials, and ethnographic artifacts.

Table 10.
Summary, by Volume, of Material Classes
Present in Warm Springs Indian Reservation
Collections at the OSMA

Material Class	%
Prehistoric	
Lithics	33
Faunal remains	36
Soil	31
Total	100

Assessment

Structural Adequacy

OSMA consists of one aboveground floor. Anthropology space, including collections storage areas, offices, and laboratories, encompasses almost 3,000 ft². The foundation is composed of concrete, while exterior walls are composed of wood and wooden shingles. The roof, which is original to the structure, is built-up asphalt. The structure is solid; no cracks or leakage have been reported. There are multiple doors and windows to the exterior; window frames are composed of wood. All windows are equipped with shades.

The 2,280 ft² collections storage area houses artifacts and associated documentation. The floor and ceiling are concrete, and interior walls are concrete block. There are no windows in the collections storage area. One solid, wooden door leads into a laboratory/storage room. There is one exterior, solid, wooden door in the rear of the storage area that leads to the retail-shop portion of the museum. Within the storage room, there are areas for the storage of artifacts, ethnographic materials, records, and photographs. The collections storage area is filled to approximately 70-percent capacity with archaeological, ethnographic, paleontological, and zoological

materials. More than 90 percent of the materials are archaeological and ethnographic.

Environmental Controls

An HVAC system, within which heating is accomplished with gas-forced air, is utilized for environmental control. Humidity is monitored by hygrothermographs and hygrometers; it is controlled in the collections storage area, but not in the offices or laboratories. Humidity and temperature are checked daily. The air-circulation systems are equipped with dust filters. Physical plant and cleaning staff regularly maintain and clean the repository. Lighting is accomplished through the use of fluorescent tubes that are equipped with ultraviolet filters. In the collections storage area, maintenance and cleaning are conducted monthly and on an as-needed basis by curatorial staff.

Pest Management

An integrated pest-management program is in place for the repository. The program includes monitoring with sticky traps and rodent traps, while control measures take place on a six-month-to-one-year schedule and on an as-needed basis. Pest control is performed by a contracted pest-management company.

Security

Security measures for OSMA consist of key locks on exterior and interior doors, window locks, motion detectors, and an intrusion alarm system that is wired into the campus police department. The collections storage area has key locks on the exterior door and motion detectors wired into the security system. Only OSMA staff have access to the room.

Fire Detection and Suppression

The fire-detection system at OSMA includes smoke detectors and manual fire alarms wired into the local fire department, which is two blocks away. Fire-suppression measures include fire extinguishers and fire walls. There are two fire extinguishers located in the collections storage area.

Artifact Storage

OSMA is currently curating 2.1 ft³ of artifacts recovered from the Warm Springs Indian Reservation. Material classes in the collection are summarized in Table 10.

Storage Units

Storage units for the BIA collections in the storage area consist of a wooden tabletop and a surface-sealed, wooden cabinet that measures 4 × 3 × 3 feet (w × h × d). Two boxes of BIA artifacts stored on the tabletop had recently been transferred from an additional storage location, a Quonset hut.

Primary Containers

Primary containers consist of four acidic-cardboard boxes that are of three sizes. One box measures 1.2 ft³, one 0.7 ft³, and two measure 0.1 ft³ each (Figure 25). Only the two 0.1 ft³ boxes are labeled. Labels consist of accession number written directly in marker on the box. The 0.7 ft³ box has a folded-flap lid and has sustained water damage. The other three boxes have telescoping lids.

Secondary Containers

The Warm Springs artifact collection is stored in four types of secondary containers (Table 11). Paper bags are labeled directly in ink or pencil with contents, site name, and provenience. Plastic, zip-lock bags and paper bags generally have interior, acidic-paper labels with site number, provenience, and date recorded in pen. Glass vials have interior, acidic-paper tags and masking tape on their exteriors, with site number and provenience recorded in pen.

Laboratory Processing and Labeling

Approximately 25 percent of the Warm Springs artifacts have been cleaned, 25 percent have been labeled, and 70 percent have been sorted by material class. Labels are written directly on the artifacts, in ink over white correction fluid, and include site number and catalog number.

Human Skeletal Remains

OSMA is not curating any human skeletal remains recovered from Indian reservations in the project area.



Figure 25. Primary and secondary containers used in housing the Warm Springs Indian Reservation collection at the OSMA have been recently transferred from an off-site storage facility (a Quonset hut).

Table 11.
Summary, by Volume, of Secondary Containers Used for Warm Springs Indian Reservation Collections at the OSMA

Container Type	%
Glass vials	2
Loose	14
Paper bags	66
Plastic bags (stapled)	17
Plastic, zip-lock bags	1
Total	100

Records Storage

Four linear inches of associated records are stored at OSMA, all in the collections storage area. The storage unit for paper records and maps is a locking, letter-size, baked-enamel, metal, lateral file cabinet that measures 1.5 × 5.4 × 3.5 feet (w × h × d) and has five drawers (Figure 26). The storage unit for photographic records is a baked-enamel, metal photograph cabinet measuring 16 × 37 × 7 inches (w × h × d).

Paper Records

There are 3 linear inches of paper records in the Warm Springs collection. Secondary containers for the records consist of manila folders and a typewriter-paper box that contains bound transit books. Manila folders are labeled in pencil or pen with accession number, site name, and document type. The typewriter-paper box is labeled, in marker, with accession number and project number.

Photographic Records

Photographic records total approximately 0.75 linear inches. There are approximately 40 photographic slides in the collection, which are stored in plastic, archival sleeves within a vinyl binder. The slides are directly labeled in pen; label information consists of the subject of the photograph. Slides are stored with paper records. There are six photographs and negatives stored in the photograph-storage cabinet. Photographs are glued on index cards, and a small manila envelope glued to the back of each card houses the negative. The cards are preprinted and have specific photograph information typed onto them.

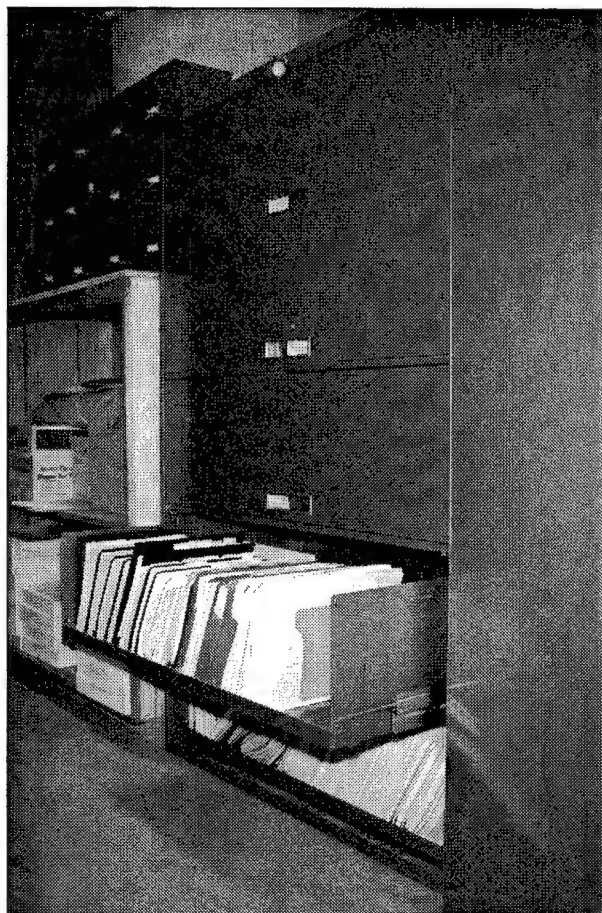


Figure 26. Records and photograph storage is located within the collections storage area of the OSMA.

Maps and Oversized Documents

Small maps comprise approximately 0.25 linear inches of the collection. These are stored, some flat and some folded, with paper records.

Collections-Management Standards

Registration Procedures

Accession Files. Collections are accessioned, sometimes prior to receipt, into OSMA.

Location Identification. The location of artifacts is identified in the accession files.

Cross-Indexed Files. Files for some collections are cross-indexed by site number and accession number.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A trinomial site-numbering system is utilized for site-record administration. OSMA keeps backup copies of state site forms.

Computerized Database Management. The dBASE III+ program is utilized by OSMA for NAGPRA documentation, but only for collections from outside the state of Oregon. Backups are created as necessary on disks and stored on-site in a fireproof cabinet. Collections records are stored and accessed on the Internet, but cannot be changed or tampered with. There is no local network server containing the collections records.

Written Policies and Procedures

Minimum Standards for Acceptance. There are formal minimum standards for the acceptance of archaeological materials.

Curation Policy. There is no formal curation policy that addresses receipt, processing, and use of materials. However, one is currently in development.

Records-Management Policy. No formal records-management policy that addresses guidelines and standards for the curation of documentation has been created, but such a policy is currently in development.

Field-Curation Procedures. There are formal guidelines for field curation.

Loan Policy. There are formal loan policies and procedures in place that apply to archaeological materials. These fall under state property rules.

Deaccessioning Policy. There is a formal deaccessioning policy. This policy falls under state property rules.

Inventory Policy. No formal inventory policy has been written.

Latest Collection Inventory. Collections are constantly being inventoried. The last full inventory occurred when the OSMA moved into its new structure.

Curation Personnel

Dr. Pam Endzweig, the collections manager, is the only member of the curatorial staff. She is currently employed by OSMA on a half-time

basis, and has other duties at the university. Graduate and undergraduate students assist Dr. Endzweig with curatorial activities.

Curation Financing

OSMA charges curation fees for the processing and accessioning of archaeological collections. Staff feel that the current level of financing is adequate for curation.

Access to Collections

Access to collections is tightly controlled by Dr. Don Dumond, the director, and the collections manager. Access is usually limited to staff and graduate students, and is always supervised. Written permission must be obtained for outside researchers to access the collections.

Future Plans

There are no plans for future upgrades of the curation program.

Comments

1. The repository has an HVAC system. Humidity is monitored and controlled in most areas.
2. There is an integrated pest-management program in place.
3. Security measures consist of key locks, motion detectors, and an intrusion system wired into the campus police department.
4. Repository fire-suppression equipment consists of fire extinguishers. Fire-detection devices are smoke detectors and manual fire alarms that are wired into the local fire department, which is only two blocks away.
5. Artifacts are housed in acidic-cardboard-box primary containers and nonarchival secondary containers.
6. Records are stored in acidic-paper envelopes, and photographs are glued to acidic index cards. Slides are stored in archival-quality plastic sleeves.
7. The collections manager is funded on a half-time basis for curation activities, and is the only

paid staff member with time devoted to care of the collections.

Recommendations

1. Install a sprinkler system in the repository. If this is not possible, add heat sensors and ensure that sensors and smoke detectors are wired into the local fire department.
2. Rebox and rebag artifacts into acid-free cardboard boxes and 4- and 6-mil, archival-quality, plastic, zip-lock bags. Label artifacts directly in indelible ink, and insert acid-free paper labels made from spun-bonded polyethylene paper (e.g., Nalgene polypaper) into the secondary containers.
3. Copy archaeological documentation onto acid-free paper, and archivally store the records in acid-free folders within acid-free cardboard boxes or fireproof file cabinets. Produce duplicates of associated documentation and store these copies in a separate, secure location.
4. Fund the collections manager for full-time curation activities.

Reports Relating to Archaeological Investigations on Warm Springs Indian Reservation

Cole, David L., and Richard M. Pettigrew
 1977 Letter report to the Oregon State Department of Transportation, regarding archaeological survey of the Warm Springs Agency Section, Warm Springs Highway, Jefferson County, Oregon. *University of Oregon, Museum of Natural History Report* No. 148. Eugene.

Greene, Eugene
 1977 Letter report to the Bureau of Indian Affairs, regarding historical/archaeological impact of proposed Beaver Creek-Simnasho-Schoolie water system. *Warm Springs Tribe, Report* No. 823. Warm Springs Indian Reservation, Oregon.

Mahar, James Michael

- 1953 *Ethnobotany of the Oregon Paiutes of the Warm Springs Indian Reservation*. Unpublished Master's thesis. Division of History and Social Sciences, Reed College. Report 93-254.

Minor, Rick

- 1978 *A Survey for Cultural Resources in Portions of the Warm Springs Indian Reservation*. Report submitted by Don E. Dumond, Department of Anthropology, University of Oregon, Eugene, to the Pacific Northwest Region, National Park Service, Seattle.
- 1979 Letter report to the Confederated Tribes of the Warm Springs Indian Reservation, regarding a survey for cultural resources in the Dry Creek area, Warm Springs Indian Reservation, Jefferson County, Oregon.

Report submitted by Don E. Dumond, Department of Anthropology, University of Oregon, Eugene. *Report No. 793*.

- 1979 Letter report to the Bureau of Indian Affairs, regarding Bureau of Indian Affairs survey Jackson Trail Road, Jefferson County. Report submitted by the University of Oregon, Eugene. *Report No. 792*.

Ross, Richard Everett

- 1963 *Prehistory of the Round Butte area, Jefferson County, Oregon*. Unpublished Master's thesis. Department of Anthropology, University of Oregon, Eugene.

Note: Relates directly to the archaeological collections evaluated by St. Louis District personnel.

Colville and Spokane Indian Reservations

Washington

Collections Summary

BIA Area Office Responsibility: Portland

Volume of Artifact Collections: 5.6 ft³
(Colville and Spokane materials are stored together)

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 2 linear feet (24 linear inches)

Compliance Status: Documentation requires no rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: Approximately 5.6 ft³, a minimum of 53 individuals, is fragmented and stored in four boxes. Associated funerary objects are present. The human skeletal remains are to be reinterred as soon as possible, at the request of the Colville and Spokane Tribes, and St. Louis District personnel did not inspect the remains or associated materials inside the storage containers at the request of the tribes.

Location of Collections: Cheney Cowles Museum, Spokane

Collections Identified: Columbia River Basin Survey

Confederated Tribes of the Colville Reservation

The Colville Reservation was established in 1872 for a number of northwest tribes. Today, confederation members include portions of the Colville, Chelan, Entiat, Methow, Okanogan, San Poil, Lake, Nespelem, Nez Perce, Palouse, Moses, Sinkiuse, and Wenatchee groups. Also included are some tribal members of the Coeur d'Alene, Kalispel, and Spokane. Because of the tribal diversity present in the Confederation, the reservation has been the frequent target of fed-

eral attempts to relocate and/or remove portions, and termination. The reservation remains one of the largest in the northwest (Walker 1994).

Spokane

The Spokane Indian Reservation lies in northeastern Washington, on the north side of the Spokane River and east of the Columbia River. The reservation, which totals nearly 155,000 acres, was established for the Spokane Tribe in 1881. Prior to 1881, relations between the U.S.

and the Spokane had deteriorated because of an 1858 military encounter and continued encroachment of white settlers in the area. Fort Spokane was established at the mouth of the Spokane River in 1880, and the reservation was established the following year (Ross 1994).

The Columbia River Basin Survey

Human skeletal remains, artifacts, and associated documentation from the Columbia River Basin Survey (CRBS) of 1939–1940 are presently curated at the Cheney Cowles Museum (CCM), the repository for the Eastern Washington State Historical Society (EWSHS), Spokane, Washington. The human skeletal remains (5.6 ft³, 53 MNI) and associated funerary objects are to be reinterred as soon as possible, at the request of the Colville and Spokane Tribes. The CRBS work was partly conducted on the Colville and Spokane Indian Reservations, and focused heavily on burials and burial goods. CCM will be the long-term curation repository for the project documentation and photographic material.

The CRBS was a multipartner project primarily supported by EWSHS and the National Youth Administration, Washington. Scientific support was provided by the Department of Anthropology, University of Washington; and the Department of Sociology and Anthropology, State College of Washington. Multiple federal agencies cooperated in the effort, including the Bureau of Reclamation, Works Progress Administration, Civilian Conservation Corps, Nespelem Agency, and the BIA. The project resulted in Collier, Hudson, and Ford's 1942 publication.

According to the report, 35 sites were investigated, including a total of 150 burials. Human skeletal remains were recovered from 89 of the burials, and 61 burials were too decomposed to be saved. In the 1950s, a small portion of the collection was loaned by the EWSHS to the University of Washington. This collection did not return until 1995, and is the collection currently stored at CCM. In 1975, the portion of the collection stored at EWSHS was transferred to the University of Idaho. In 1978, a total of 105

individuals from this collection was analyzed by Dr. Roderick Sprague of the University of Idaho; funding was provided by the Colville Confederated Tribes. In 1979, 173 individuals were reinterred on the Colville Indian Reservation, 97 at Keller, and 76 at Inchelium. Reburial was funded by the Colville Tribes.

The 1939–1940 Columbia River Basin Survey was conducted partially on the Colville and Spokane Indian Reservations, and partially on Bureau of Reclamation lands. Table 12 lists the sites and number of burials represented in the collection, and their probable BIA ownership status (as best determined from site-file searches and associated maps). Unfortunately, the collections records do not detail the proveniences of the sites or link them to land ownership. However, land ownership for the collections currently at the CCM appears to be divided between the BIA and other federal agencies. It should be noted that, given the lack of provenience information, the determination of land ownership (and thus responsibility) in these cases is problematic at best.

The current collection of human remains and artifacts was not examined by the assessment team because of their sensitive nature, at the request of the Colville and Spokane Tribes. The associated documentation, however, was examined.

Cheney Cowles Museum

Date of Visit: August 21, 1995

Point of Contact: Lynn Pankonin, Curator of American Indian Collections

BIA Collections Present: Colville and Spokane Indian Reservation collections from the Columbia River Basin Survey.

CCM is located in downtown Spokane, Washington. The museum displays and curates artifacts, art, documents, and other items related to the history of eastern Washington. The BIA collection includes 5.6 ft³ of artifacts and 2 linear feet of associated documentation. The artifact collection consists of human skeletal remains

Table 12.
Site Numbers, Number of Individuals,
and Probable BIA Ownership Status of
CRBS Collections at the CCM

CRBS Site Number	Smithsonian Site Number ^a	No. of Individuals	BIA Ownership Status (Probable)
2	45LN27	8	no
7a	45FE7	3	yes
7b	45FE7	9	yes
8	45ST8	1	no
13a	45FE13	2	yes
13b	45FE13	1	yes
21	?	1	?
24a	45FE24	22	no
24b	45FE24	1	no
29	45LN29	1	no
31	45ST31	3	no
50	45ST50	1	no
Total		53	

^aThese site numbers are from a list researched by St. Louis District personnel at the University of Washington Burke Museum, the staff of which compiled the information during a telephone conversation with Central Washington University staff.

and associated funerary objects recovered during the CRBS.

CCM consists of a main repository and exhibit hall (Figure 27), and a National Historic Landmark, the Campbell House. As the repository for EWSHS, CCM has storage capability and exhibits for art objects, ethnographic materials, archaeological materials, natural history materials, documents, photographs, library materials, and other types of historical-period items.

Assessment

Structural Adequacy

The approximately 60,000-ft² main repository structure was constructed in 1959–1960 for the museum. The foundation is concrete, while exterior walls are brick and limestone. The flat roof, replaced in 1990, consists of composition and tar. The building is structurally solid, but has had cracks and leakage problems in the past. There have been minor renovations in the past; one of the largest was the 1983–1984 addition of a new environmental-control system. The structure consists of three aboveground floors, and has multiple exterior windows. All windows have metal frames and are equipped with shades.

There are two collections storage areas at CCM: the archives storage room (1,600 ft²) and

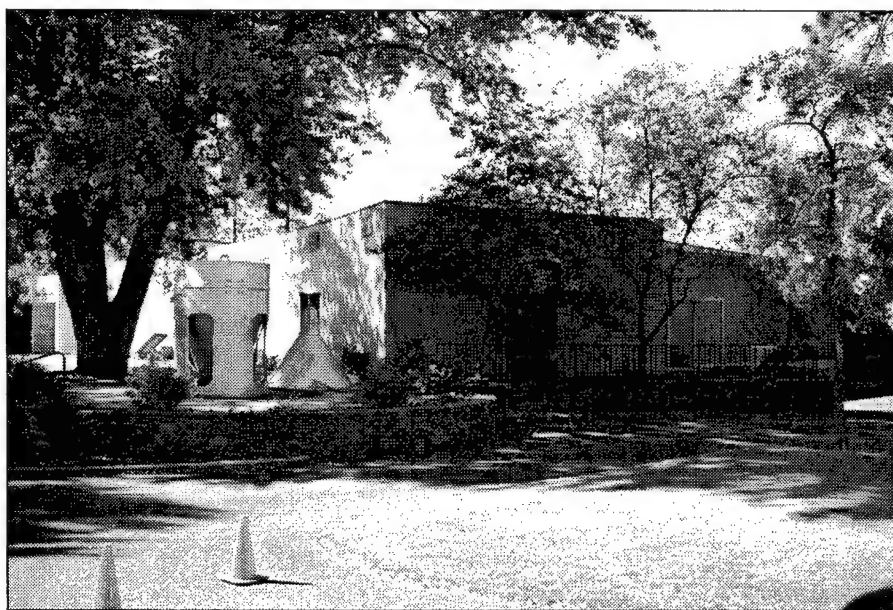


Figure 27. Front exterior view of the CCM in Spokane, Washington.

the artifacts storage room (1,200 ft²). Both storage rooms do not have exterior windows, and have few doors to the remainder of the repository. Doors to the repository are constructed of heavy steel. Both rooms have suspended acoustical ceilings and concrete floors that are covered with linoleum. The walls are concrete block.

Environmental Controls

CCM operates an HVAC system for environmental control throughout the repository, including both collections storage areas. The system is equipped with dust filters and small-particulate filters. Humidity is constantly monitored by hygrothermographs and computerized sensors that are located throughout the structure. The targeted temperature is 62–65° F, and the targeted humidity level is 35–40 percent. Lighting throughout the repository is fluorescent, with ultraviolet filters that are changed every five years. Maintenance and cleaning in the repository are performed weekly and on an as-needed basis by janitorial staff, and by the maintenance supervisor and curatorial staff in the secured collections storage areas.

Pest Management

CCM has an integrated pest-management program that includes monitoring and controlling measures. Monitoring consists of monthly and as-needed checks of pheromone traps deployed by a contracted pest-management company. Control is conducted on an as-needed basis by the pest-management company. There are no current signs of pest infestations.

Security

CCM utilizes several security measures, including an intrusion alarm that is wired into the police department. The intrusion alarm is connected to all windows and doors, and to motion detectors in public areas. The repository has dead bolt, key, and window locks. Access to the repository is stringently controlled by CCM staff. Collections storage areas are kept secure by tightly-controlled access and key locks. There is a considerable market value attributable to many of the museum's artifacts, art works, and documents, but not to the BIA collections.

Valuable artifacts and historical-period weapons are kept in a combination-locked vault.

Fire Detection and Suppression

Many fire-detection and -suppression measures are in place throughout the repository. Fire-detection devices include smoke detectors, heat sensors, manual fire alarms, and fire alarms wired into the local fire department, which is less than 1 mile away. Fire-suppression measures include fire walls, fire doors, two fireproof vaults, multiple fire extinguishers (checked annually), a sprinkler system, and a halon suppression system for critical collections storage areas. Each collections storage area has several fire extinguishers and all of the aforementioned fire-detection and -suppression measures. Halon is the primary in-house suppression measure because it is not destructive to many of the art works, historical-period artifacts, and historical-period documents being stored.

Artifact Storage

Due to the sensitive nature of the collections, and at the request of the Colville Confederated and Spokane Tribes, the assessment team did not look inside the primary containers containing the human skeletal remains and artifacts. Only the exterior characteristics of the boxes were observed.

The artifacts and human skeletal remains are mixed together in four acid-free, Hollinger boxes with telescoping lids, each of which measures 1.4 ft³. The primary containers are currently stored on top of a set of cabinets. Exterior labels for the boxes are adhesive, and bear typed information consisting of project name and years of duration. Secondary containers most likely consist of paper bags. The types and percentages of material classes are unknown, as is the extent of laboratory processing.

Human Skeletal Remains

According to reports and accession records, the human skeletal remains of at least 53 individuals are curated at CCM, in four standard-size boxes. The remains are probably fragmentary and not in good condition. Associated funerary objects are stored in the primary containers that contain the human skeletal remains.

Records Storage

Storage units for associated documentation and photographic materials consist of large, rolling space-saver shelves. The baked-enamel, metal shelves occupy the entire length of the archives storage room (Figure 28). Documentation for the CRBS totals 2 linear feet and is boxed in primary containers set on the shelves.

Paper Records

Eleven linear inches of paper records are stored at CCM. These records include field notebooks, inventories of artifacts and skeletal materials, and burial records. Primary containers consist of two acid-free Hollinger boxes with telescoping lids, each of which measures 1.4 ft³. Most (10 linear inches) of the paper records are stored in one box (Figure 29). Label information on the box is typed onto a preprinted, adhesive label

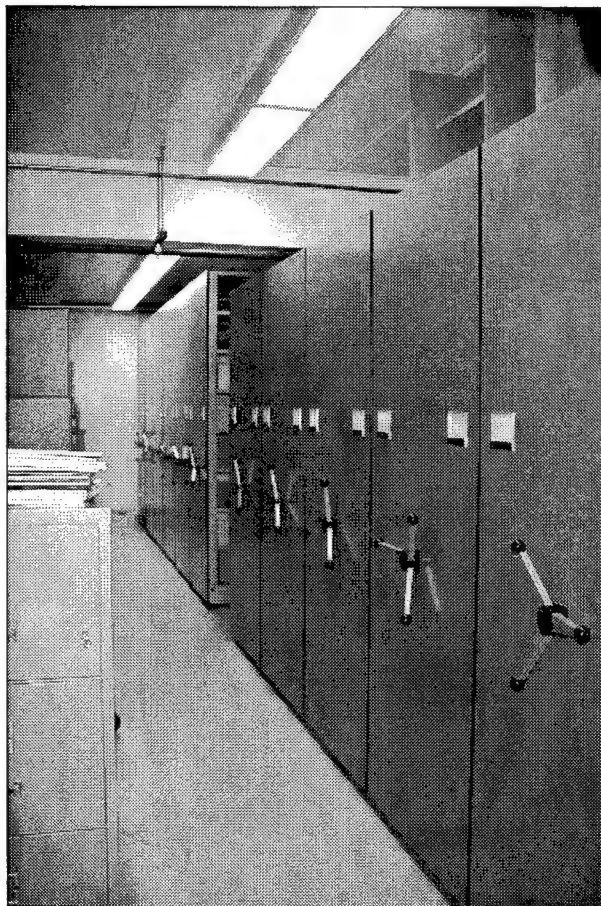


Figure 28. Space-saver storage units are used in the archives storage room.

and consists of the project name. Secondary containers are acid-free folders labeled directly in pencil with the project name, document type, and folder number. The documentation has been archivally processed by document type.

Photographic Records

Eleven linear inches of photographic records are stored at CCM. Materials present include black-and-white photographs and negatives. The primary container for photographs is one of the acid-free Hollinger boxes. Black-and-white photographs are in clear, archival, plastic sleeves within acid-free folders. Photographs are labeled on their backs in pencil with roll number and provenience. Negatives are stored in small acid-free envelopes within acid-free folders. The envelopes are labeled in pencil with roll number, provenience, and subject. The acid-free folders are labeled directly in pencil with project name and document type. These materials have been archivally processed.

Maps and Oversized Documents

One linear inch of maps is stored in the records collection. These consist of large, folded maps, small maps, and drawings. Maps are located in the primary container housing mainly paper records. As is the case for paper records, secondary containers consist of acid-free folders that are labeled in pencil with project name and document type.

Project Reports

One report, measuring 1 linear inch, is present. The report (Collier et al. 1942) is stored in an acid-free folder within the primary container that holds most of the paper records.

Collections-Management Standards

Registration Procedures

Accession Files. All collections are accessioned upon receipt, and the information is kept in accession files.

Location Identification. The locations of collections are identified in the accession file.

Cross-Indexed Files. Files are cross-indexed by manuscript number and catalog number.

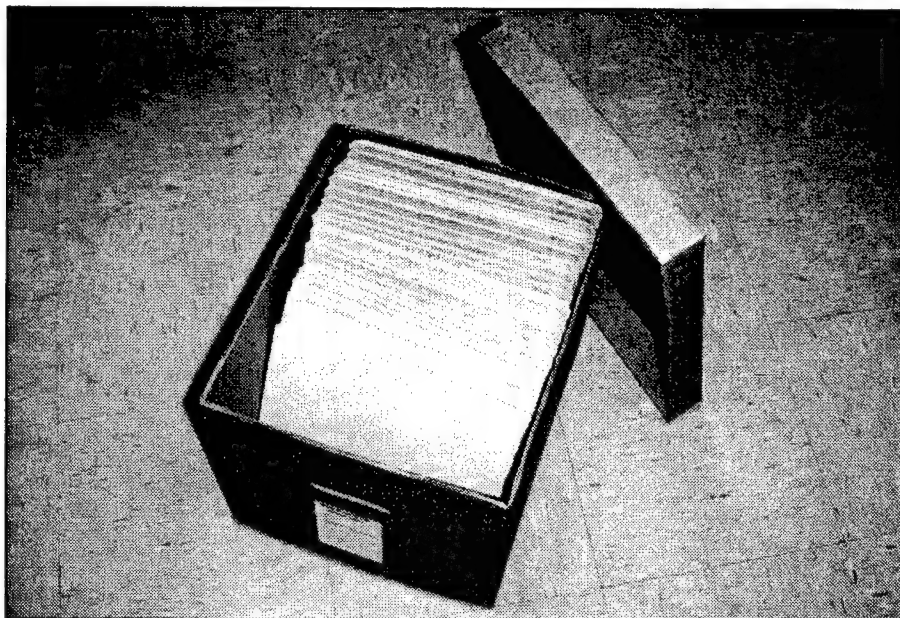


Figure 29. Hollinger boxes and acid-free folders house the CRBS documentation, which has been archivally processed by document type. Note the exterior label on the box, which is a preprinted adhesive with the project name typed onto it.

Published Guide to Collections. There is a published guide for the manuscript collections up to 1987.

Site-Record Administration. A trinomial site-numbering system is utilized.

Computerized Database Management. CCM is in the process of developing a computerized database. As yet, there is no network. Backups of records are made daily on disks, and one copy is stored in a fireproof vault within the repository.

Written Policies and Procedures

Minimum Standards for Acceptance. Minimum standards for the acceptance of archaeological collections are outlined in the collections policy.

Curation Policy. There is a comprehensive plan for curation briefly outlined in the collections policy. It does not address receipt, processing, and use of materials in any detail.

Records-Management Policy. The collections policy briefly addresses records curation, but does not contain specific guidelines or standards.

Field-Curation Procedures. No formal field-curation guidelines have been created.

Loan Policy. Loan procedures are discussed in detail within the collections policy.

Deaccessioning Policy. The deaccessioning policy is discussed in detail within the collections policy.

Inventory Policy. There is no formal inventory policy.

Latest Collection Inventory. Collections are currently being inventoried as the computer database is developed.

Curation Personnel

There is no full-time curator for the archaeological collections. However, archaeological curation falls under the responsibility of Lynn Pankonin (M.A.), who is the curator of American Indian collections. The curation staff consists of four individuals, each of whom is responsible for one area. These areas consist of American Indian collections, historical-period collections, art, and archives.

Curation Financing

In order to fund the curation of each of the four areas mentioned above, each curator submits an annual budget. Partial funding then comes from

the state. Finances are supplemented by program funding and grants. The curator of American Indian collections believes that funding is inadequate, as there is a shortage of staff, supplies, and space.

Access to Collections

Access to collections is tightly controlled. However, staff members of other areas in the repository have access to archaeological collections. Outside researchers can utilize collections by appointment, under supervision of a CCM staff member.

Future Plans

CCM has a long-term curation plan in which the physical space would be increased from 60,000 ft² to 122,000 ft² in order to better meet curation and education goals. In addition, CCM would begin a more-interactive role in the exhibition of eastern Washington prehistory and history.

Comments

1. The halon fire-suppression system, while advantageous for the protection of some materials, is dangerous to humans.
2. Secondary containers for human skeletal remains and artifacts most likely consist of paper bags.

Recommendations

1. Remove the halon fire-suppression system from public and highly utilized areas; install a zoned sprinkler system. Relocate art and other objects susceptible to water damage to an isolated room or set of rooms equipped with the halon system.
2. Place human skeletal remains and artifacts in 4- and 6-mil, polyethylene, zip-lock bags if they are to receive more than temporary care.

Reports Relating to Archaeological Investigations on Colville and Spokane Indian Reservations

Colville Indian Reservation

Caywood, Louis R.

- 1954 *Excavations at Two Fort Okanogan Sites, 1952*. USDI National Park Service, San Francisco.

Chance, David H.

- 1970 *Archaeological Survey of Coulee Dam National Recreation Area: Spring and Summer, 1970*. *University of Idaho, Anthropological Research Manuscript Series No. 2*. Moscow.

- 1978 *Archaeological Excavations of 1978 in Lake Roosevelt*. Laboratory of Anthropology, University of Idaho, Moscow. Quarterly report to the USDI Bureau of Reclamation.

Cleveland, Gregory, Judith Giniger, and Joan Alan Ross

- 1976 *Archaeological, Ethnographic and Historical Survey on the Colville Indian Reservation*. National Heritage, Colfax, Washington.

Collier, Hudson & Ford

- 1942 *Archaeology of the Upper Columbia Region*. *University of Washington Publications in Anthropology* 9:1-178.

Note: Relates directly to the archaeological collections evaluated by St. Louis District personnel.

Grabert, Garland F.

- 1965 *Archaeological Investigations at 45OK52, 1964: Interim Report Part II to the National Park Service*. Department of Anthropology, University of Washington, Seattle.

- 1970 *Prehistoric Cultural Stability in the Okanogan Valley of Washington and British Columbia*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Washington, Seattle.

- 1971 Some Implications of Settlement Variations in the Okanogan Region. In *Aboriginal Man and Environments on the Plateau of Northwest America*, edited by Arnoud H. Stryd and Rachel A. Smith, pp. 153ff. University of Calgary Archaeological Association, Calgary, Alberta, Canada.
- Jaehnig, Manfred E. W.
1979 Letter report regarding archeological reconnaissance of proposed BIA road in Goose Flat and Omak Lake areas. Colville Confederated Tribes Archaeology Project, Nespelem, Washington.
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1978 *Chief Joseph Dam Cultural Resources Management Plan*. Office of Public Archaeology, Institute for Environmental Studies, University of Washington, Seattle.
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1978 *Chief Joseph Dam Cultural Resources Survey Plan of Action*. Office of Public Archaeology, Institute for Environmental Studies, University of Washington, Seattle.
- Larrabee, Edward McM., and Susan Kardas
1966 Archaeological Survey of Grand Coulee Dam National Recreation Area, Part 1: Lincoln County above Normal Pool. *Washington State University, Laboratory of Anthropology, Report of Investigations* No. 38. Pullman.
- Leonhardy, Frank C.
1970 *An Evaluation of the Archeological Resources in the Lake Rufus Woods Area Behind Chief Joseph Dam, Columbia River, Washington*. Laboratory of Anthropology, Washington State University, Pullman.
- Lyman, R. Lee
1976 Exploratory Archaeological Research along Rufus Woods Lake, Upper Columbia River Region, North Central Washington. *Washington State University Report* No. 29. Pullman.
- Munsell, David A.
1976 *Cultural Resources Reconnaissance, Omak Urban Levees, Okanogan County, Washington*. U.S. Army Corps of Engineers, Seattle District.
- Munsell, David A., and Lawr V. Salo
1977 *Chief Joseph Dam Cultural Resources Reconnaissance Report, Rufus Woods Lake, Columbia River, Washington*. U.S. Army Corps of Engineers, Seattle District.
- Osborne, H. Douglas
1949 *Appraisal of the Archeological Resources of Chief Joseph Reservoir on the Upper Columbia River*. Columbia River Basin Project, River Basin Surveys, Smithsonian Institution, Washington, D.C.
- Ross, Lester A.
1969 *Archaeological Investigation in the Coulee Dam National Recreation Area, Spring 1969*. Laboratory of Anthropology, Washington State University, Pullman. Submitted to the USDI National Park Service.
- Salo, Lawr, and David A. Munsell
1979 *Chief Joseph Dam Columbia River Washington Comprehensive Management Plan, Cultural Resources*. U.S. Army Corps of Engineers, Seattle District.
- Sprague, Roderick, and Jay Miller
1979 Chief Joseph Dam Ancestral Burial Relocation Survey Rufus Woods Lake, Washington. *University of Idaho, Anthropological Research Manuscript Series* No. 51. Moscow.
- Sprague, Roderick, and Walter H. Birkby
1973 Burials Recovered from the Narrows Site (45OK11), Columbia River, Washington. *University of Idaho, Anthropological Research Manuscript Series* No. 11. Moscow.
- Walker, Deward E., Jr., and Sylvester L. Lahren
1977 Anthropological Guide for the Coulee Dam National Recreation Area. *University of Idaho Anthropological Research Manuscript Series* No. 33. Moscow.

Spokane Indian Reservation

Brauner, David

- 1974 *Little Falls and Bull Pasture Survey, Stevens County, Washington*. Washington Archaeological Research Center, Washington State University, Pullman.

Collier, Donald, Alfred E. Hudson, and Arlo Ford

- 1942 Archaeology of the Upper Columbia Region. *University of Washington Publications in Anthropology* 9:1-178.

Note: Relates directly to the archaeological collections evaluated by St. Louis District personnel.

Flenniken, J. Jeffrey

- 1979 *A Cultural Resource Survey of Proposed Drill Site Areas on the Spokane Indian Reservation #3*. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

Huelsbeck, David R.

- 1978 *A Cultural Resources Survey of Proposed Drill Site Areas on the Spokane Indian Reservation*. National Heritage. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

Rice, David G.

- 1968 Archaeological Investigations in the Coulee Dam National Recreation Area, Spring 1968. *Washington State University, Laboratory of Anthropology, Report of Investigations* No. 45. Pullman.

Rice, Harvey S.

- 1977 *Cultural Resources Survey of a Proposed Mineral Exploration Area near Sand*

Creek, Spokane Indian Reservation. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

- 1977 *A Survey for Cultural Resources on Lands Leased by Western Nuclear, Inc. on the Spokane Indian Reservation*. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

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- 1978 *A Cultural Resource Survey of Drill Sites on the Denison Lease, Spokane Indian Reservation*. National Heritage. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

- 1978 *A Cultural Resource Survey of Drill Sites on the Boyd Allotments, Spokane Indian Reservation*. National Heritage. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

- 1978 *A Cultural Resource Survey for Mining Activity on the Boyd Allotments, Spokane Indian Reservation*. Manuscript on file, Washington Archaeological Research Center, Washington State University, Pullman.

Rice, Harvey S., and John A. Ross

- 1980 Cultural Resource Survey of the Southern and Eastern Boundaries of the Spokane Indian Reservation. *Washington State University, Washington Archaeological Research Center Project Report* No. 101. Pullman.

Makah Indian Reservation

Washington

Collections Summary

BIA Area Office Responsibility: Portland

Volume of Artifact Collections: None

Linear Feet of Records: < 1 linear foot (1.25 linear inches)

Compliance Status: All associated records require complete rehabilitation to comply with

federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Location of Collections: Washington State University, Pullman

Collections Identified: Ozette Site (45CA24)

“Makah Tribe” actually refers to a small set of nearly autonomous villages located on the coasts of Washington state. The villages were linked by marriage, kinship, and the Makah language. The 1855 Treaty of Neah Bay established the reservation. However, the multiple village systems that existed prior to the treaty had not been recognized, so in a series of 1872 Executive Orders the boundaries of the reservation were extended. In 1893, the Ozette Reservation was established, south of the Makah Reservation, for a small group of Makah who refused relocation (Renker 1994).

The tribe is actively involved in the preservation of its cultural heritage, and operates the Makah Cultural and Research Center. This museum is the repository for artifacts recovered from the Ozette Site, a portion of the Ozette village which had been catastrophically covered in a mudslide prior to contact with Euroamericans. In the 1970s, archaeologists from Washington State University assisted in the excavation and conservation of more than 55,000 artifacts. Many

of the artifacts were wood or other perishable materials that were preserved in the anaerobic-mud environment. This collection is one of the most important, and most stunning, ever recovered from the Northwest Coast culture area. A small collection of documentation is curated at Washington State University (WSU) Museum of Anthropology, but consists mostly of deaccessioning records. This repository also houses a collection from the Yakima Indian Reservation; to avoid duplication, particulars of this collection are also discussed here.

Washington State University Museum of Anthropology

Date of Visit: December 6, 1995

Points of Contact: Mary Collins, Assistant Director; Joy Mastrogiuseppe, Curator

BIA Collections Present: A Makah Indian Reservation collection from 45CA24 and a Yakima Indian Reservation collection from 45YK16, 45YK28, and 45YK106

Faculty from WSU, Pullman, have conducted a great number of archaeological projects in the Pacific Northwest during past decades. The most prominent project was an investigation of the Ozette Site, which is located on the Makah Indian Reservation, Washington. A great number of collections and a number of publications resulted work at Ozette, but the artifact collections are now located at the Makah Cultural and Research Center, on the reservation. The artifact collection requires complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological collections. Only a small amount of documentation associated with Ozette is still located at WSU.

The Museum of Anthropology curates 2.7 ft³ of artifacts recovered from the Yakima Indian Reservation, and approximately 2 linear inches of associated documentation concerning work conducted on the Makah and Yakima Indian Reservations. The bulk of the collection consists of prehistoric lithics (97%), with faunal remains making up the remainder. It should be noted that the WSU museum is not the same as the Center for Northwest Anthropology (CNA), which is also operated by the WSU. CNA, which is currently directed by Dr. Bill Andrefsky, was established in the mid-1980s. CNA conducts contract-archaeology projects and has produced most of the WSU's archaeological collections since its establishment. CNA is located in a structure separate from that housing the WSU museum. The WSU museum curates the majority of collections acquired prior to the establishment of CNA. All BIA collections are curated at the museum, rather than at CNA.

The WSU museum operates two storage locations for the curation of its archaeological collections. The first is the museum building itself (Storage Location 1), located in College Hall, which houses classrooms, laboratories, offices, a museum, and storage for documentation, special archaeological materials, and ethnographic artifacts. Storage Location 1 houses the documentation associated with the BIA collections. Storage Location 2 is an anthropology storage building

located on the eastern edge of the WSU campus, where artifact collections (including BIA) are stored.

Storage Location 1: Museum of Anthropology

Assessment

Structural Adequacy

College Hall is a campus building that is composed primarily of classrooms, offices, and laboratories. It was constructed over 50 years ago, and has three floors aboveground and one below (Figure 30). Anthropology space, including the museum, storage areas, offices, and laboratories, exceeds 10,000 ft². The foundation is composed of concrete, while exterior walls are brick. The roof is built-up asphalt and shingles. It was redone in 1983 when other major renovations were performed on the structure, which is solid and has no cracks or leaks. There are multiple doors and windows on the exterior, with window frames composed of wood. Windows are equipped with shades.

The collections storage area is located on the first floor of College Hall. The floor is concrete with tile overlay, and interior walls are plaster-board. The ceiling is composed of suspended acoustical tiles. There is one exterior window on the north side of the room, and it is equipped with shades. One wood-panel door leads to an inner hallway. The door has a glass panel toward the top, but wire mesh is present in the glass. There are areas for records study and storage, and photographic materials refrigeration within the storage room. The collections storage area is filled to approximately 60-percent capacity with archaeological documentation.

Environmental Controls

An HVAC system is utilized for environmental control. Humidity is neither monitored nor controlled, but is usually 40–50%. The air-circulation systems are equipped with dust filters. Physical plant and cleaning staff regularly maintain and clean the storage location. Lighting is

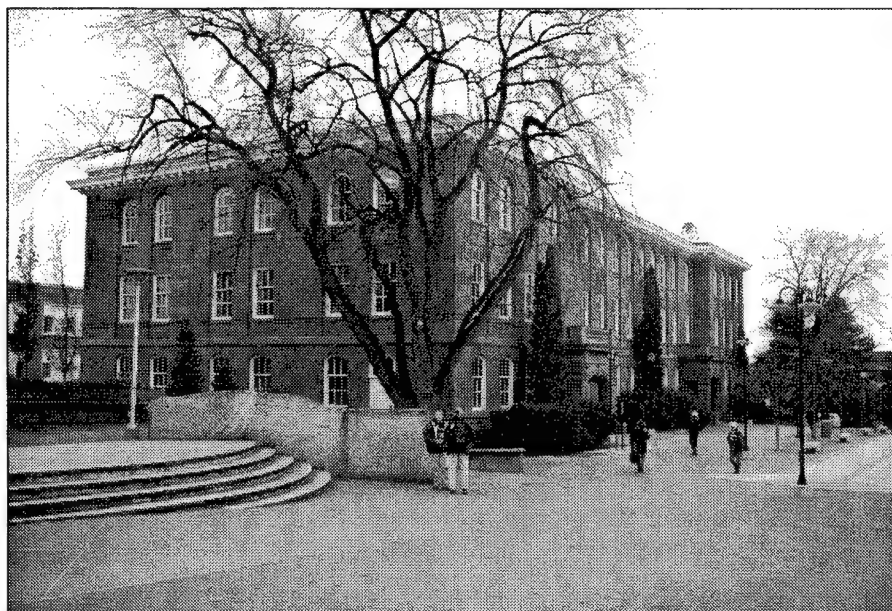


Figure 30. Exterior view of College Hall, WSU, in Pullman, Washington.

provided by non-ultraviolet-filtered fluorescent tubes. Maintenance and cleaning in the collections storage area are conducted by curatorial staff on an as-needed basis.

Pest Management

An integrated pest-management program is in place, which includes monitoring by use of sticky traps and rodent traps, and controlling on an as-needed basis. Pests are not common, and there is currently no evidence of pest infestation.

Security

Security measures for College Hall consist of key locks on exterior and interior doors, dead bolt locks on some interior doors, window locks, and patrols by campus police. In addition, there is an intrusion alarm system that is wired into the campus police.

The collections storage area is secured by key locks on the exterior door, a lock on the exterior window, and motion detectors connected to the security system. Only three members of the staff have access to the room.

Fire Detection and Suppression

Fire-detection devices in College Hall consist of manual fire alarms that are wired into the local fire department and heat sensors that are located

in the third-floor stairwells. Fire-suppression equipment consist solely of halon fire extinguishers. No fire extinguishers are located within the collections storage area.

Artifact Storage

The Yakima Indian Reservation artifacts curated at WSU are stored in Storage Location 2 (see below).

Human Skeletal Remains

WSU is not curating any human skeletal remains recovered on Indian reservations in the project area.

Records Storage

Two linear inches of associated records are stored at WSU. All are stored in the collections storage area of Storage Location 1. Refer to Table 13 for a summary of documentation amounts and types for the Makah and Yakima Indian Reservations.

Paper Records

Paper records total 1 linear foot. Half are associated with archaeological investigations on the Makah Indian Reservation, and half with such work on the Yakima Indian Reservation. Primary containers consist of letter-size, metal file cabinets

Table 13.
Summary of Associated Documentation (in Linear Inches), by Reservation, at WSU

Reservation	Documentation Type			Total
	Paper	Photographs	Report	
Makah	0.5	0.25	0.5	1.25
Yakima	0.5	0.25	—	0.75
Total	1.0	0.5	0.5	2.0

that measure 15 × 52 × 28 inches (w × h × d) and have four drawers. The cabinets are numbered, while their drawers are labeled by county name with laser-printed tags. All associated documentation is organized by site number within county.

Secondary containers consist entirely of hanging, manila file folders that are labeled with accession and site numbers. Labels for secondary containers are either direct ink on an adhesive, plastic imprinted tag (from an imprint gun), tape, or folder divider tags. Within the hanging, manila file folders, documents are loose or contained in accordion folders.

Photographic Records

Photographic records include approximately 50 slides of work conducted on the Makah Indian Reservation and one negative of work conducted on the Yakima Indian Reservation. Slides are stored in archival-quality, plastic sleeves and housed in the same primary and secondary containers as the paper records. The one negative is stored in a metal photograph file cabinet that measures 1.6 × 4.3 × 2.3 feet (w × h × d; Figure 31). Drawers are labeled with typed paper tags in metal tag holders, and are organized according to county and drawer number. Within county, organization is according to site number. The one negative is located in a small pre-printed, acidic-paper folder glued to the back of a blue index card. The front portion of the card is labeled in pen with the site number.

Project Reports

Report records are stored with paper records in the same primary and secondary containers.

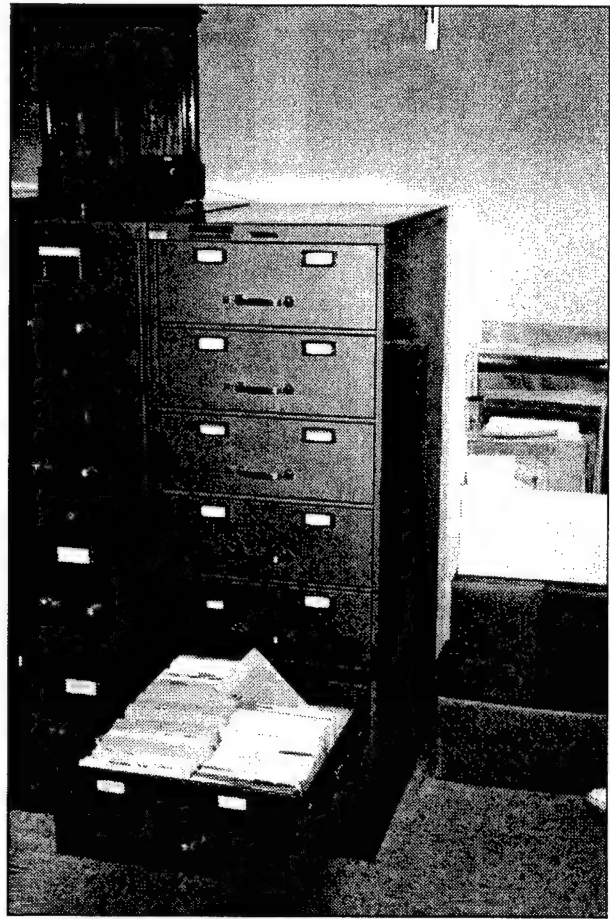


Figure 31. The records storage room in Storage Location 1 houses both paper and photographic records in metal filing cabinets. The open file drawer displays the one negative which is housed in an acidic manila envelope and glued to the back of a blue index card.



Figure 32. Exterior view of Storage Location 2, the anthropology storage building, located on the eastern edge of the WSU campus.

Storage Location 2: Anthropology Storage Building

Assessment

Structural Adequacy

The anthropology storage building encompasses approximately 4,000 ft² dedicated to the department's storage of collections and field equipment (Figure 32). The building was constructed in 1983 specifically for storage. The foundation is concrete, while exterior walls are corrugated-metal siding. The roof is constructed of corrugated metal, and is insulated with fiberglass. The structure is solid; there are no cracks in the foundation or leakage through the roof. The structure has one floor, and recent renovations included the addition of a rest room and running water. There are no windows, but several exterior doors and a large loading dock door are present. Water leaks through the seal between the loading-dock door and the foundation during periods of heavy rain.

The collections storage area is the east wing of the storage location, which is separated from

the west wing by an interior door. There is an interior, wood-panel door to another storage room and an additional metal-panel door to the exterior. The loading-dock door opens into the collections storage area. The collections storage area encompasses approximately 1,800 ft² and is filled to approximately 75-percent capacity with archaeological collections.

Environmental Controls

The storage location is equipped with gas-operated heat only. There is no air-conditioning, nor any means of humidity monitoring or controlling. The building is regularly maintained and cleaned on an as-needed basis by curatorial staff or other university staff when necessary. Lighting in the storage area is accomplished by non-ultraviolet-filtered fluorescent lamps.

Pest Management

An integrated pest-management program is in place, which includes monitoring by the use of sticky traps and rodent traps, and controlling on an as-needed basis. Pests are uncommon, and there is currently no evidence of any pest-infestation problems.



Figure 33. The interior of Storage Location 2 contains storage units consisting of steel wire uprights and shelves.

Security

The anthropology storage building is secured by key locks on all exterior doors and by an exterior, gated fence that is locked after business hours by staff from the adjacent recycling facility. The encircling fence is equipped with barbed wire strung across its top. Museum and physical plant staff have key access to the structure.

Fire Detection and Suppression

The fire-detection device consists of a manual fire alarm system that is wired into the local fire department. Fire-suppression equipment consists of multiple fire extinguishers located throughout the storage location; one is located in the collections storage area.

Artifact Storage

WSU is curating 2.7 ft³ of artifacts recovered from the Yakima Indian Reservation. Artifacts from this collection are stored only in the collections storage area of Storage Location 2.

Storage Units

Storage units in the collections storage area consist of steel uprights and shelves measuring 8 ×

7 × 3 feet (w × h × d) that are three shelves high (Figure 33).

Primary Containers

Primary containers consist of two acidic-cardboard boxes, one measuring 1 ft³ and the other 1.7 ft³. Labels are paper or index cards taped to the sides of the boxes. Label information is written in marker, and consists of site numbers and contents. The 1.7-ft³ box has a telescoping lid (Figure 34), while the other primary container has folded flaps. This smaller container has a large hole cut out of its top. Both primary containers exhibit water damage and are covered with dust.

Secondary Containers

The Yakima collection is stored in three types of secondary containers (Table 14). Only the small manila envelopes are labeled; labels are written directly in marker or pencil. Label information consists of site number and artifact number.

Laboratory Processing and Labeling

All artifacts have been sorted by material class, cleaned, and labeled. Label information, which is directly recorded using ink on white correction fluid, includes site number and artifact number.

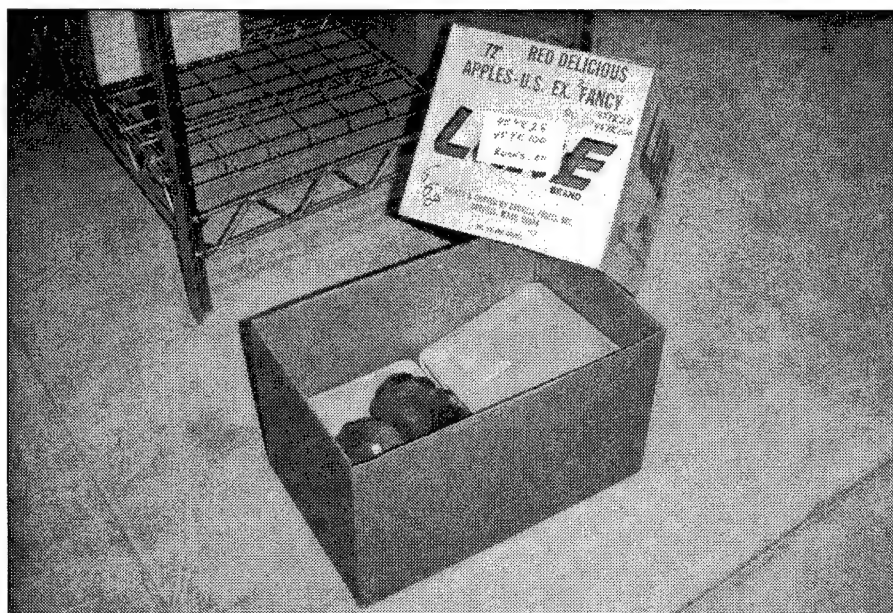


Figure 34. Example of an acidic-cardboard produce box housing lithic artifacts in Storage Location 2. Secondary containers consist of foam/cardboard trays and small manila envelopes. Note the exterior label displaying the site numbers which is taped the side of the box.

Table 14.
Summary, by Volume, of Secondary Containers Used for Yakima Indian Reservation Collections at WSU

Container Type	%
Loose	37
Small manila envelopes	6
Yellow foam/cardboard trays	57
Total	100

Human Skeletal Remains

WSU is not curating any human skeletal remains recovered on Indian reservations in the project area.

Records Storage

Two linear inches of associated documentation are stored at WSU, all in Storage Location 1 (see Table 13). Refer to the assessment of Storage Location 1, above, for a discussion of records storage at WSU.

Collections-Management Standards

Registration Procedures

Accession Files. No archaeological collections have been accessioned in years. CNA stores collections at a separate repository, and the museum has accumulated very little since the establishment of CNA.

Location Identification. Locations of artifacts are identified in the accession files.

Cross-Indexed Files. Files in some collections are cross-indexed by site number and accession number.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A trinomial site-numbering system is utilized for site-record administration.

Computerized Database Management. The Paradox database-management system is utilized, but only for limited functions. Museum activities and inventories are not fully computerized. However, future plans include further computerization.

Written Policies and Procedures

Minimum Standards for Acceptance. There are no formal minimum standards for the acceptance of archaeological materials, but such a document will soon be produced.

Curation Policy. No formal curation policy is in place that addresses the receipt, processing, and use of materials.

Records-Management Policy. There is no formal records-management policy addressing guidelines and standards for the curation of documentation.

Field-Curation Procedures. No formal guidelines for field curation have been written.

Loan Policy. There are formal loan policies and procedures applying to archaeological materials.

Deaccessioning Policy. A formal deaccessioning policy is in place. The materials from the Ozette Site have been deaccessioned to the Makah Cultural and Research Center on the Makah Indian Reservation.

Inventory Policy. There is no formal inventory policy.

Latest Collection Inventory. Collections are currently being inventoried. In October 1995, a 60-percent inventory (three largest sites) was completed and entered into the computer database.

Curation Personnel

The museum has a new assistant director, Mary Collins (ABD), hired in December 1995. Formerly, there was no full-time director for the museum. Joy Mastrogiuseppe (M.A.) is the full-time, nine-month-term curator for the collections. Mastrogiuseppe has been in this position for less than one year. The museum typically operates with the help of three student volunteers. With a new staff and a newly created director's position, there are many plans and goals for the curation program. Many formal policies and procedures are likely to be developed in the near future, and collections and storage locations may be upgraded, funds permitting. Curation agreements with state and federal agencies are a top priority.

Curation Financing

Curation is financed mostly by funds from university operating budgets. In the past, some curation funds have come from federal agencies. Special university funds built the repository, and the university provides salaries, maintenance, and minor capital improvements. Curation agreements are the future mechanism for upgrading collections and repositories.

Access to Collections

Access to collections is tightly controlled by the director and curator, and is usually limited to staff and graduate students. Supervision is always required.

Future Plans

With the addition of a new assistant director and curator, the Museum will be finishing complete inventories of collections, developing curation policies and procedures, and will be striving toward curation agreements with state and federal agencies for the rehabilitation of collections and upgrading of storage locations.

Comments

1. Neither storage location has suitable controls for air-conditioning. Humidity is neither monitored nor controlled in either storage location.
2. Security measures in College Hall consist of key or dead bolt locks on exterior and interior doors and a security alarm wired into the campus police. Security for the storage building consists of key locks on exterior doors and an exterior fence with barbed wire strung across the top.
3. Fire detection (manual fire alarms) is present in both storage locations. Fire extinguishers are the only means of fire suppression in either storage location.
4. Primary containers for artifacts consist of acidic-cardboard boxes.
5. Secondary containers for artifacts consist mostly of acidic-foam/cardboard trays or other nonarchival materials.

6. Records are not archivally stored in acid-free folders and acid-free boxes or fireproof cabinets.

7. The assistant director and curator are newly hired and are currently conducting a basic inventory of archaeological collections. Curation policies and procedures are being developed.

Recommendations

1. Monitor humidity in both storage locations with a hygrothermograph or sling psychrometer. Control humidity with a dehumidifier.

2. Install a security system in Storage Location 2. Wire the system into campus and local police departments.

3. Install a sprinkler system in each storage location. Replace halon fire extinguishers with dry chemical and water extinguishers, and place these in all areas of each storage location.

4. Rebox and rebag artifacts in acid-free cardboard boxes and 4- and 6-mil, archival-quality, plastic, zip-lock bags. Label artifacts directly in indelible ink, and insert acid-free paper tags made from spun-bonded polyethylene paper (e.g., Nalgene polypaper) into the secondary containers.

5. Copy associated documentation onto acid-free paper, and store it archivally in acid-free folders within acid-free cardboard boxes or fireproof file cabinets. Produce an additional copy of documentation and store in a separate, secure location.

Reports Relating to Archaeological Investigations on Makah Indian Reservation

Aronstam, Elliott M.

- 1975 *Human Remains from the Ozette Village Archaeological Site*. Unpublished Master's

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Squaxin Island Indian Reservation

Washington

Collections Summary

BIA Area Office Responsibility: Portland

comply with federal regulations and modern archival-preservation standards.

Volume of Artifact Collections: 2.2 ft³

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Human Skeletal Remains: Minimum of one individual (2 vertebrae)

Linear Feet of Records: < 1 linear foot (0.5 linear inches)

Compliance Status: All collections of associated records require complete rehabilitation to

Location of Collections: Western Washington University, Bellingham

Collections Identified: Dr. Herbert Taylor's Sites 1, 4, and 9 (possible matches to sites 45MA37 and 45MA54)

The Squaxin Island Indian Reservation was established in 1854 for Squaxin Island tribal people. The reservation was established under the Medicine Creek Treaty. During the subsequent 1855–1856 Puget Sound Indian War, the Squaxin were confined to the island, but thereafter dispersed to the surrounding Puget Sound areas. Today the island reservation is used primarily for fishing, camping, hunting, and shellfish gathering. Among the more prominent contributions of the Squaxin was John Slocum's 1882 founding of the Indian Shaker Church, which became one of the most influential Native American religions in the Pacific Northwest (Robinson and Whitener 1994).

No major archaeological work was conducted on the Squaxin Island Indian Reservation prior to October 31, 1979. A small collection was acquired through the work of Western Washington University (WWU), Bellingham, staff in the

1950s, where it is still stored. The collection includes artifacts from the late Dr. Herbert Taylor's Sites 1, 4, and 9, which may match sites 45MA37 and 45MA54. No bibliographic references were located for the Squaxin Island Indian Reservation.

Western Washington University

Date of Visit: December 8, 1995

Points of Contact: Dr. Sarah Campbell, Professor of Anthropology; Carey Miller, Research Assistant

BIA Collections Present: Squaxin Island Indian Reservation collection of Dr. Herbert

Taylor's Sites 1, 4, and 9 (these sites may match sites 45MA37 and 45MA54).

Over several decades, WWU faculty conducted a number of archaeological investigations throughout the western region of the state. In the late 1980s, the faculty who had conducted this research passed away, and as a result, much of the knowledge pertaining to a large portion of the collections at WWU was lost. Dr. Sarah Campbell began teaching at WWU in the late 1980s, and has taken steps to rehabilitate and research the collections, including the addition of research assistant Carey Miller, hired by means of a NAGPRA grant received from the university. WWU is curating 2.2 ft³ of artifacts and 0.5 linear inches of associated documentation from archaeological investigations on the Squaxin Island Indian Reservation in the 1950s. The artifact collection primarily consists of prehistoric materials, with some items from historical-period contexts. Of the total, prehistoric material classes include human skeletal remains (31%), faunal remains (64%), and botanical (3%), whereas historical-period material classes consist of glass (1%) and metal (1%). The human skeletal remains are two human vertebrae that have been inventoried for NAGPRA.

WWU operates two separate storage locations in Bellingham, Washington. Storage Location 1 is Arntzen Hall, on the main campus; it houses human skeletal remains, associated documentation, and collections being rehabilitated. Storage Location 2 is the Armory, which has a small room devoted to deep storage of collections and field equipment.

Storage Location 1: Arntzen Hall

Assessment

Structural Adequacy

Arntzen Hall is a campus structure composed primarily of classrooms, auditoriums, offices, and laboratories (Figure 35). It was completed in 1974, and consists of five floors aboveground and one below. The total floor space of the building is 98,330 ft². The foundation and exterior walls are composed of concrete block. The roof is built-up asphalt with shingles; in some areas it is original to the structure, and in some areas been replaced (in 1991 and 1992). Windows



Figure 35. Exterior view of Arntzen Hall on the campus of WWU in Bellingham, where Room 317, the collections storage area, is located.

curve up and into the roof on the east side of the structure, forming a partial skylight. One of these windows, in the collections storage area, sometimes leaks during high winds. Over the years, there have been multiple interior renovations, for the most part consisting of the addition and removal of walls. There are multiple exterior doors and windows on the exterior. Window frames are aluminum. Asbestos is present under the floor tiles, but is sealed under a coating and cannot become airborne.

The collections storage area is the archaeology laboratory, which is located on the third floor of Arntzen Hall. The floor is concrete, while interior walls are plywood. The ceiling is composed of suspended acoustical tiles. There are multiple exterior windows on the east side of the room, each equipped with shades. One set of double doors leads into an inner hallway of Arntzen Hall, while one exterior door leads to a concrete patio equipped with stairs to other lower and higher patios on the east side of the building. There are two interior doors leading to other rooms, one a darkroom and the other a room for the storage of special (mostly ethnographic) collections. Within the storage room there are areas for artifact washing, processing, study, and storage, records study and storage, and drafting. The collections storage area is filled to approximately 80-percent capacity with archaeological and ethnographic collections.

Environmental Controls

Environmental controls consist of central water heating only. This storage location is not air-conditioned. If necessary, a fan is utilized during the summer. Air-circulation systems are equipped with dust filters. Humidity is neither monitored nor controlled. Physical plant and cleaning staff regularly maintain and clean the storage location. Lighting is accomplished by non-ultraviolet-filtered fluorescent tubes. Maintenance and cleaning are conducted in the collections storage area by curatorial staff on an as-needed basis.

Pest Management

There is no integrated pest-management program in place for either storage location. Although there are no signs of insect or rodent

infestations, precautions are taken only on an as-needed basis.

Security

Security measures for Arntzen Hall consist of key locks on exterior and interior doors and patrols by campus police. Some interior libraries have intrusion alarms, but these are few. A portion of the collections storage area is equipped with a metal gate that can be locked with a padlock. There have been episodes of unauthorized entry in the past. The week prior to the assessment team's site visit, a laser printer was stolen from the anthropology department.

Fire Detection and Suppression

Fire-detection equipment for Arntzen Hall consists of manual fire alarms. Fire-suppression devices consist entirely of fire extinguishers. Within the collections storage area, there are two fire extinguishers located near the sink area. One extinguisher is dry chemical and the other is carbon dioxide.

Artifact Storage

Human skeletal remains in the Squaxin Island Indian Reservation collection are stored in Storage Location 1. Artifacts from this collection are not stored in Storage Location 1. Refer to the assessment of Storage Location 2, below, for a discussion of artifact storage at WWU. Material classes present in the collection are outlined in Table 15.

Storage Units

Storage units, which measure 11 × 1 feet (w × d), consist of 0.5-inch-thick wooden shelves fastened to the wall.

Secondary Containers

The Squaxin Island collection (including the human skeletal remains) is stored in three types of secondary containers (Table 16). In all cases, if present, labels are written in marker or pencil directly on the container. Label information generally consists of project, provenience, contents, and date. Less than 50 percent of the older paper bags in the collection are labeled. Labels written in pencil are fading rapidly.

Table 15.
Summary, by Volume, of Material Classes
Present in Squaxin Island Indian
Reservation Collections at WWU

Material Class	%
Prehistoric	
Human remains	31
Faunal remains	64
Botanical	3
Historical-period	
Glass	1
Metal	1
Total	100

Human Skeletal Remains

Two human vertebrae recovered from the Squaxin Island Indian Reservation are curated at WWU. They are currently stored in Storage Location 1, in a 0.7-ft³, acidic-cardboard box (Figure 36). The box has a telescoping lid. A foam sheet lines the bottom of the box. A computer-generated, paper label is taped to the side of the box, with information including contents, prove-

Table 16.
Summary, by Volume, of Secondary
Containers Used for Squaxin Island Indian
Reservation Collections at WWU

Container Type	%
Cardboard boxes	34
Paper bags	34
Plastic bags	32
Total	100

nience, date, and project reference. There is one secondary container for the two human vertebrae, a 2-mil, archival-quality, zip-lock, plastic bag. The bag is labeled directly in marker with provenience, date, and contents.

Only the two human vertebrae are stored in the primary container. The vertebrae show good preservation and are in fair condition. The minimum number of individuals is one. The human skeletal remains have not been directly labeled.

Records Storage

Approximately 0.5 linear inches of associated records are stored at WWU. These include



Figure 36. Inside this acidic-cardboard box (from Storage Location 1) are two human vertebrae from Squaxin Island, placed inside a secondary container consisting of a 2-mil archival quality zip-lock plastic bag. The exterior box label, which is both computer-generated and typed, includes location and provenience information.

originals and copies. Approximately 0.25 linear inches of these are stored in Storage Location 1; the remaining 0.25 linear inches are stored in Storage Location 2, in the box that contains the artifacts.

Paper Records

In Storage Location 1, there are approximately 0.25 linear inches of site forms, site maps, and artifact inventories. The artifact inventories were compiled recently. The primary container for these records is a set of metal letter boxes sitting on a tabletop (Figure 37). The letter boxes measure 1.3 × 3.3 × 2 feet (w × h × d). An index card, labeled "Taylor" in marker, is taped to the shelf. The secondary container for the records is one legal-size manila folder with "Squaxin Island" written in marker on an adhesive label.



Figure 37. A metal letterbox filing system is being used in Storage Location 1 for documentation storage.

Storage Location 2: Armory

Assessment

Structural Adequacy

Storage Location 2 encompasses approximately 66,280 ft² and is operated by WWU for a variety of storage purposes, one of which is archaeological storage (Figure 38). The structure was originally constructed for use as an armory, but has since served a variety of functions, including former use as a roller-skating rink. A cornerstone on the sandstone-block foundation dates the structure to 1910. Exterior walls are sandstone, while the roof consists of two distinct portions. There is an original dome structure consisting of wooden beams and shingles and a flat addition (1975) consisting of built-up asphalt and shingles. Although the walls are solidly constructed, there are cracks in the foundation and leakage through the roof. There are two floors above-ground and one below, and multiple interior and exterior renovations have taken place. There are multiple windows, all with wooden frames and without shades. Some of the windows near the roof are broken.

The collections storage area is a small room located on the top floor of the Armory. The storage area has a wooden floor, while walls are composed of plaster laid over brick and wooden frames. The ceiling is composed of wood. One wall has suffered water damage from a leak above (Figure 39). There is one wood-panel door to the interior of the storage location, and two windows to the exterior. Each window measures approximately 2 × 3 feet (w × h). The collections storage area encompasses 370 ft², and is filled to near capacity with archaeological collections and field equipment.

Environmental Controls

Storage Location 2 is not equipped with environmental controls, and is not regularly maintained or cleaned. However, the collections storage area is maintained and cleaned on an as-needed basis by curatorial staff. Lighting in the storage area is by incandescent bulbs.



Figure 38. Exterior view of the Armory building (Collections Storage Area 2) where the Squaxin Island collection is stored in a small room on the top floor.

Pest Management

There is no integrated pest management program in place for either storage location. Although there are no signs of insect or rodent infestations, precautions are taken only on an as-needed basis.

Security

Storage Location 2 is secured by key locks and some dead bolt locks on exterior and interior doors. Three or four departments on campus have access to the building, as do university police. There is a key lock on the door to the collections storage area.

Fire Detection and Suppression

There are no means of fire detection. Fire-suppression devices consist solely of multiple fire extinguishers. There is one dry-chemical fire extinguisher in the collections storage area, and it needs recharging.

Artifact Storage

WWU is currently curating 2.2 ft³ of artifacts recovered on the Squaxin Island Indian Reservation. Artifacts (1.5 ft³) in the collection are stored in Storage Location 2. Human skeletal remains in the collection are stored in Storage

Location 1. Material classes in the collection are summarized in Table 15.

Storage Units

Storage units consist of wooden shelves of plank construction, which measure 8 × 8 × 1.5 feet (w × h × d; Figure 40).

Primary Containers

The primary container consists of one 1.5-ft³, acidic-cardboard box (Figure 41). The box has a paper label taped to its side. Label information is written in marker and consists of project, site numbers, level bags, and date. The cardboard box has unsealed folded flaps and is slightly water damaged. In addition to housing artifacts, the box contains three pages of original notes (the initial artifact inventory) on top of the secondary containers.

Secondary Containers

The Squaxin Island collection is secured in three types of secondary containers (see Table 16). Labels, if present, are written in marker or pencil directly on the container. Label information generally consists of project, provenience, contents, and date. Less than 50 percent of the older paper bags in the collection are labeled. Labels written in pencil are fading rapidly.



Figure 39. One wall of the collections storage area in Storage Location 2 has been damaged by water. Note also the piles of miscellaneous equipment cluttering the floor.

Laboratory Processing and Labeling

None of the artifacts has been cleaned or labeled, but all have been sorted by material class.

Human Skeletal Remains

No human skeletal remains from the Squaxin Island collection are curated in Storage Location 2. Refer to the assessment of Storage Location 1, above, for a discussion of human skeletal remains curated at WWU.

Records Storage

Approximately 0.5 linear inches of associated records are stored at WWU. These include originals and copies. Approximately 0.25 linear inches of these are stored in Storage Location 1;



Figure 40. View of wooden shelf storage units and acidic-cardboard primary containers in the collections storage area of Storage Location 2.

the remaining 0.25 linear inches are stored in Storage Location 2, in the box that contains the artifacts.

Paper Records

There are approximately 0.25 linear inches of artifact level inventories, which are labeled by provenience, stored in Storage Location 2. The records are folded and stored loose on top of the artifacts in the primary container. Surface dirt and dust are present, but the records are in fair condition.

Collections-Management Standards

Registration Procedures

Accession Files. Some accessioning is conducted, particularly of ethnographic materials.

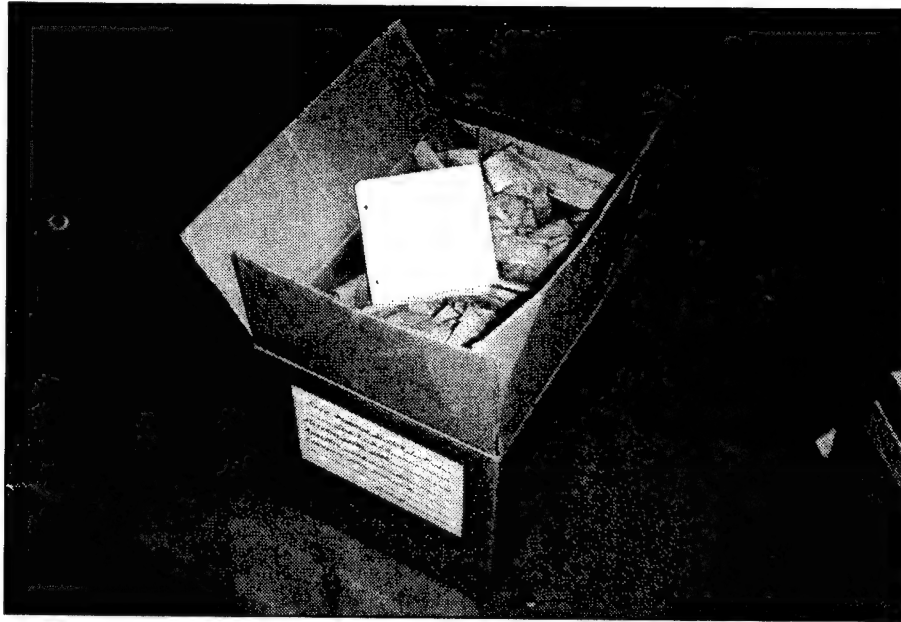


Figure 41. One acidic-cardboard box contains artifacts from Squaxin Island that are stored in acidic-paper bags, with associated records (three sheets of folded notebook paper) placed loosely on top.

However, not all materials are accessioned upon receipt (e.g., historical-period documents and some artifacts).

Location Identification. The locations of artifacts are not identified in the accession files.

Cross-Indexed Files. Files are not cross-indexed. Files are accessed by site number only.

Published Guide to Collections. No guide to the collections has been published.

Site-Record Administration. A trinomial site-numbering system is utilized for site-record administration.

Computerized Database Management. There is currently no computerized database-management system. Future plans include the addition of such a system.

Written Policies and Procedures

Minimum Standards for Acceptance. No formal minimum standards for the acceptance of archaeological materials have been created.

Curation Policy. There is no formal curation policy that addresses the receipt, processing, and use of materials.

Records-Management Policy. No formal records-management policy addressing guidelines and standards for the curation of documentation is in place.

Field-Curation Procedures. No formal guidelines for field curation have been written.

Loan Policy. There are no formal loan procedures in place.

Deaccessioning Policy. No formal deaccessioning policy has been created.

Inventory Policy. No formal inventory policy is in place.

Latest Collection Inventory. Collections are currently being inventoried.

Curation Personnel

Dr. Sarah Campbell is the professor responsible for the archaeology laboratory. Dr. Campbell's duties include teaching and research, and she is not able to devote her full time to curation activities. The lab is currently staffed with one research analyst, Carey Miller (B.A.), who is currently inventorying the collections for NAGPRA. Miller is thoroughly researching all archaeological collections and producing inventories.

Curation Financing

Curation is financed by the anthropology department's operating budget and from a NAGPRA grant from the university. Staff feel that curation funding is inadequate.

Access to Collections

Access to collections is tightly controlled by Dr. Campbell and is usually limited to staff and graduate students.

Future Plans

WWU is currently working on NAGPRA inventories and a basic inventory of the collections. Ideally, there will be future plans for remodeling to provide more curation space.

Comments

1. Storage Location 2 is not a structurally sound, suitable storage location for the storage of artifacts. There are water and air leaks, structural problems with the walls, and broken windows.
2. Neither Storage Location 1 nor Storage Location 2 have suitable environmental controls. Only Storage Location 1 has heating, and neither storage location has air-conditioning or humidity controls.
3. Neither storage location has an integrated pest-management program in place.
4. Security measures in both storage locations consists of key or dead bolts locks on exterior and interior doors.
5. Fire-detection devices (manual fire alarms) are present only in Storage Location 1, and fire extinguishers are the only means of fire suppression in either storage location.
6. Primary containers for artifacts and human skeletal remains consist of acidic-cardboard boxes.

7. Secondary containers for artifacts consist mostly of acidic-paper bags and other nonarchival materials.

8. Records are not archivally stored in acid-free folders and acid-free boxes.

9. Human skeletal remains have been separated from the remainder of the collections and properly inventoried for NAGPRA purposes.

10. Curation staff are currently conducting a basic inventory of all archaeological collections that have been stored at WWU through the decades.

Recommendations

1. Provide additional curation space in Storage Location 1 for artifact storage. Remove the collections from Storage Location 2.
2. Install an HVAC system in Storage Location 1. If not possible, monitor humidity with a hygrothermograph or sling psychrometer, and control humidity with a dehumidifier.
3. Implement an integrated pest-management program that includes monitoring and controlling.
4. Install a security system for the collections storage area in Storage Location 1. Wire the system into the campus and local police departments.
5. Install a sprinkler system in Storage Location 1. If not possible, install a fire-detection system (e.g., smoke detectors and heat sensors) in the collections storage area, and wire it into the local fire department.
6. Rebox and rebag artifacts and human skeletal remains into acid-free cardboard boxes and 4- and 6-mil, archival-quality, plastic, zip-lock bags. Label artifacts directly in indelible ink, and insert acid-free paper tags made from spun-bonded, polyethylene paper (e.g., Nalgene poly-paper) into the secondary containers.

7. Copy associated documentation onto acid-free paper, and archivally store the records in acid-free folders within acid-free cardboard boxes or fire-proof file cabinets. Produce an additional copy of documentation and store in a separate, secure location.

8. Hire a full-time curator for the collections. If not possible, hire an additional research analyst to continue the inventorying and rehabilitation of the collections.

Swinomish Indian Reservation

Washington

Collections Summary

BIA Area Office Responsibility: Portland

comply with federal regulations and modern archival-preservation standards.

Volume of Artifact Collections: 5.5 ft³

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Human Skeletal Remains: 2.2 ft³ (minimum of 3 individuals)

Linear Feet of Records: < 1 linear foot (1 linear inch)

Compliance Status: All collections of associated records require complete rehabilitation to

Location of Collections: Seattle Central Community College, Seattle

Status of Curation Funding: Curation is not funded.

Collections Identified: Twiwoc Site (45SK31)

The Swinomish Indian Reservation is located north of Seattle in western Washington state and was established by the 1855 Treaty of Point Elliott. The reservation encompasses approximately 7,500 acres. The Swinomish Tribe is composed of several tribes, which include the Swinomish proper, Lower Skagit, Kikiallus, and some Samish. The Lower Skagit, Kikiallus, and Samish have attempted in the past to gain independent, federally recognized status, but have so far been unsuccessful (Miller 1994).

No major archaeological work was conducted on the Swinomish Indian Reservation prior to October 31, 1979. Small collections (Twiwoc Site, 45SK31) were recovered by Dr. Astrida R. Blukis Onat during the 1970s, and are housed at Seattle Central Community College (SCCC).

Seattle Central Community College

Dates of Visits: May 26–27, 1994, and June 15, 1995

Point of Contact: Dr. Astrida R. Blukis Onat, Professor of Anthropology

BIA Collections Present: Swinomish Indian Reservation collection from the Twiwoc site (45SK31)

Approximately 5.5 ft³ of artifacts and 1 linear inch of associated documentation from archaeological investigations on the Swinomish Indian Reservation are stored at SCCC. The artifact collection consists of materials from prehistoric

Table 17.
Summary, by Volume, of Material Classes
Present in Swinomish Indian Reservation
Collections at SCCC

Material Class	%
Prehistoric	
Lithics	7
Human remains	19
Faunal remains	37
Worked faunal remains	13
Shell	1
Soil	1
Historical-period	
Ceramics	1
Glass	1
Metal	16
Plastic	4
Total	100

and historical-period contexts. Of the total, prehistoric material classes include lithics (7%), human skeletal remains (19%), faunal remains (37%), worked faunal remains (13%), shell (1%), and soil (1%), whereas historical-period material classes include ceramics (1%), glass (1%), metal (16%), and plastic (4%) (Table 17). General repository information for SCCC was collected in a May 26 and 27, 1994, visit for a U.S. Navy Engineering Field Activity, West, project. Another visit was made by St. Louis District personnel on June 15, 1995, to examine specific BIA collections.

The BIA collections are stored on the fourth floor of the Broadway-Edison Building on the SCCC campus. The collections storage room is the Anthropology Laboratory, which is located in a structure primarily utilized for classrooms and offices. Other laboratories and a cafeteria are also present.

Assessment

Structural Adequacy

The Broadway-Edison Building is a brick structure with a concrete foundation. The current

structure is the result of two major additions or wings completed in 1972 and 1973. The earliest section of the structure was constructed in the 1940s as the Edison Technical School. Since the additions, and the change in function from a technical school to a community college, the structure encompasses approximately 440,000 ft². It has five floors aboveground and one below. The structure meets Americans with Disabilities Act requirements.

Environmental Controls

The environment within the repository is controlled by a computerized HVAC system throughout the day and night. The system was installed in 1973, and has been updated an estimated three-to-four times during the history of the college. The environmental system is part of a statewide management system. Repository temperature is set for 73° F, and relative humidity is set at 60 percent. The HVAC system contains dust filters that are changed by the house maintenance staff in accordance with a computerized maintenance schedule.

Pest Management

Cockroach strips, mouse strips, and rat traps are utilized for monitoring pests. The pest-control policy includes a complete yearly deinfestation. Most of these activities are conducted in the designated storage areas of the repository, which do not include the Anthropology Laboratory. Cockroaches have been a continuous challenge, and a dead moth was encountered in a primary container during our inspection. Pest-infestation problems are constantly monitored and controlled.

Security

Security measures for the building include a 24-hour, in-house guard and an infrared intrusion alarm system that has sensors on all glass entrances and sound detectors placed in strategic locations throughout hallways. A maintenance person and a security person are always on call by means of cellular phone. The repository is locked from 10:00 p.m. to 7:00 a.m. and closed on Sundays and holidays. Past incidents of unauthorized access have generally been individuals who stayed in the building after hours for shelter.

The last incident of unauthorized entry occurred approximately one year ago. No unauthorized entrance of the Anthropology Laboratory has ever been reported.

Special security keys are necessary to access the offices and laboratories. Only three people have access to Anthropology Laboratory keys. Persons are allowed access to the laboratory only under the supervision of a key holder. The only individuals holding keys are Dr. Blukis Onat, another instructor who uses the lab, and the division chair (who holds a master key). Janitors are admitted only upon the request of Dr. Blukis Onat; this does not occur on a regular basis. All of the numerous first-floor windows are accessible from the exterior, but are permanently sealed.

Fire Detection and Suppression

Fire-safety measures for the Broadway-Edison Building include wet-pipe sprinklers in each room and throughout the hallways, manual fire alarms, fire doors, heat sensors, smoke detectors, and a limited supply of fire extinguishers. Interior doors are of the hollow, wood-panel type, and are filled with fire-retardant materials.

Artifact Storage

Storage Units

Collections are stored on free-standing, adjustable shelving units that measure 15 × 6 × 1.5 feet (w × h × d). The units have baked-enamel, metal frames with pressboard shelves. Refer to Table 17 for a summary of material classes present in the collection.

Primary Containers

Primary containers are standard-size, acidic storage boxes with telescoping lids. Each box has a volume of approximately 1 ft³. Primary container labels consist of self-stick notes with information written in marker. Label information includes site number, year, and a description of the contents.

Secondary Containers

A variety of secondary containers are utilized, including paper and plastic bags (Table 18).

Table 18.
Summary, by Volume, of Secondary Containers Used for Swinomish Indian Reservation Collections at SCCC

Container Type	%
Cardboard boxes	10
Loose	10
Paper bags	79
Plastic bags	1
Total	100

Label Information is written directly in pen, and consists of site number and year.

Laboratory Processing and Labeling

Approximately 30 percent of the artifacts have been cleaned, but none is labeled. Approximately 85 percent of the artifacts are sorted by material class.

Human Skeletal Remains

Approximately three human burials (2.2 ft³) were recovered from site 45SK31 on the Swinomish Indian Reservation. The majority of the human skeletal remains have been cleaned, but none is labeled. Their present condition and state of preservation are good. Primary containers consist of two standard-size, acidic-cardboard boxes. Secondary containers are paper bags and small acidic-cardboard boxes with telescoping lids.

Records Storage

One linear inch of documentation associated with site 45SK31 is almost exclusively housed with the artifact collection on an adjustable, metal shelving unit.

Paper Records

Paper records consist of 0.5 linear inches of field notes that are in a hard-bound, student field-notes book. The documents are stored in an acidic-cardboard box that measures 1.1 ft³ and has a telescoping lid. There are no secondary containers, no records have been archivally

processed, no finding aids are available, no security copies have been produced, and no particular arrangement was apparent other than that the records all pertain to the site. The general appearance of the collection is fair, but some records are discolored, torn, dirty, and have sustained water damage. Contaminants (e.g., paper clips and staples) were noted.

Photographic Records

Photographic records include negatives and contact sheets. These are stored loose with the paper records.

Collections-Management Standards

The SCCC Anthropology Laboratory does not consider itself a curation repository. Therefore, collections-management standards will not be discussed in this report.

Curation Personnel

Dr. Blukis Onat is the only individual maintaining the collection. Numerous students have processed the materials in the past, but there is no full-time curator for the collections.

Curation Financing

No curation financing is available. The purchase of acidic boxes was the only contribution SCCC made to the curation of the collection.

Access to Collections

The collection has been accessible to students processing the artifacts. Interested Native Americans historically linked to the central and north Puget Sound areas have been given portions of the collections for use as teaching tools. The collections are also available to any legitimate researcher interested in analyzing them.

Future Plans

Dr. Blukis Onat retired from the SCCC in June 1995. The Swinomish Tribe had expressed interest in obtaining the collections excavated from their reservation. Whether their intention for the human skeletal remains is reburial or storage is unclear. One option mentioned was the storage of the collection at the nearby Skagit County Historical Museum, LaConner, Washington, which has shown definite interest in working

with all involved parties in order to become a repository for these collections.

Comments

1. Environmental controls have remained state-of-the-art and been professionally maintained since the initial storage of the collection in the Anthropology Laboratory.
2. The security system is adequate for the safety of the collection.
3. The fire-detection system is adequate as a whole, but would be more effective if a fire extinguisher is placed within the room, rather than down the hall.
4. All artifacts are presently curated in acidic primary and secondary containers.
5. Documentation is not stored archivally; those in containers are within acidic packaging. Those that have been stored on open shelving have sustained damage from ceiling leakage. Because of the poor storage conditions, the loose materials, including the maps, are deteriorating. Duplicates of the records have not been made.
6. Damage has occurred to some loose paper records and a number of the primary storage containers housing the artifact collections. This was due to the unfortunate placement of a science laboratory, with running water, directly above the Anthropology Laboratory, which makes this an unsuitable location for the collections.
7. There is no institutional responsibility for the collections. Definite plans for the appropriate care of the collection must be finalized before Dr. Blukis Onat retires in June 1995.

Recommendations

1. Move all collections to an environmentally controlled, secure building with adequate fire-prevention systems. Implement an integrated pest-management program that includes monitoring and controlling.

2. Identify all recovered associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony, as defined by NAGPRA, and determine their disposition.

3. Analyze all human skeletal remains according to NAGPRA-specified procedures.

4. Obtain a dry-chemical fire extinguisher; place it in the collections storage area.

5. Inventory and replace acidic-cardboard boxes with standard-size, acid-free, cardboard boxes. Replace secondary artifact containers with 4-mil, zip-lock, polyethylene bags, and label these in indelible ink. Interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

6. Duplicate all documentation, inventory the records, and store these materials in a separate, fire-safe, secure location in acid-free containers. Obtain all loaned artifacts and document their return.

7. Transfer all unprotected slides, negatives, and photographs to archival-quality, polyethylene sleeves.

8. Arrange for the transfer of BIA collections to a suitable repository.

Reports Relating to Archaeological Investigations on Swinomish Indian Reservation

Blukis Onat, Astrida R.

1974–1975 Skagit County Survey (Site Update) Records. Anthropology Laboratory, Seattle Central Community College, Seattle.

1978 *Archaeological Field Reconnaissance, Lone Tree Point/Tosi Point*. Anthropology Laboratory, Seattle Central Community College, Seattle.

Bryan, A. K.

1955 *An Intensive Archaeological Reconnaissance in the Northern Puget Sound Region*. Unpublished Master's thesis, Department of Anthropology, University of Washington, Seattle.

1957 Results and Interpretations of Recent Archaeological Research in Western Washington with Circum-Boreal Implications. *Davidson Journal of Anthropology* 3(1):1–16.

1963 An Archaeological Survey of Northern Puget Sound. *Occasional Papers of the Idaho State University Museum* No. 11.

Munsell, D. A.

1975 *An Archaeological Investigation of Selected Areas along Swinomish Channel, Skagit County, Washington*. U.S. Army Corps of Engineers, Seattle District.

Salo, L. V.

1976 *Swinomish Channel FY77 Maintenance Dredging, Cultural Resources Reconnaissance*. U.S. Army Corps of Engineers, Seattle District.

Tulalip Indian Reservation

Washington

Collections Summary

BIA Area Office Responsibility: Portland

Volume of Artifact Collections: 7.1 ft³

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: < 1 linear foot (0.25 linear inches)

Compliance Status: All collections of associated records require partial rehabilitation to com-

ply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Location of Collections: Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

Collections Identified: Sites 45SN8, 45SN38, and 45SN39

The Tulalip Indian Reservation is home to several Indian tribes that in 1855 signed the Treaty of Point Elliott. The reservation name refers to Tulalip Bay, and the Tulalip Tribes are actually comprised of the Snohomish, Snoqualmie, and Skykomish Tribes and their Allied Nations (Fitzpatrick 1994).

No major archaeological work was conducted on the Tulalip Indian Reservation prior to October 31, 1979. However, a collection from sites 45SN8, 45SN38, and 45SN39 exists. The collection is curated at the Thomas Burke Memorial Washington State Museum (Burke Museum), University of Washington, Seattle.

Thomas Burke Memorial Washington State Museum

Date of Visit: December 12, 1995

Points of Contact: Dr. Julie Stein, Curator of Archaeology; Laura Phillips, Collections Manager

BIA Collections Present: Tulalip Indian Reservation collections from sites 45SN8, 45SN38, and 45SN39.

The Burke Museum was founded in the late 1800s by a group of men known as the "Young Naturalists." The Burke Museum moved to its

present location on the University of Washington campus in 1962. Built to house the museum, the structure has gallery and exhibit areas, labs for each section (e.g., archaeology, ethnology, geology, and zoology), office space, collections storage areas, and classrooms. Approximately 7.1 ft³ of artifacts recovered on the Tulalip Indian Reservation are curated at the Burke Museum, as are a small amount (less than 0.25 linear inches) of related catalog cards.

Most repository information for the Burke Museum was collected in a September 27, 1994, visit by St. Louis District personnel for a U.S. Navy Engineering Field Activity, West, project (Holland and Halpin 1995).

The museum is a three-story structure, with two floors aboveground and one below, that encompasses approximately 77,000 ft². Within the repository are exhibit, research, laboratory, and storage areas, loading bays, and mechanical-utility rooms. The archaeology section is located in the basement, and has a hallway that serves as storage space, a laboratory-office, and two collections storage rooms (one containing only artifact collections and the other housing accession records, a small collection of publications, and artifacts). Collections are also housed in an off-site storage location. Federal collections are stored in three of these areas: in the hallway and in both collections storage rooms. These have been designated as Collections Storage Area 1, the collections storage room containing only artifacts; Collections Storage Area 2, the combination accession records, publication, and artifact storage area; and Collections Storage Area 3, the hallway utilized as additional storage space. Collections Storage Areas 1–3 encompass 750 ft², 1,050 ft², and 650 ft², respectively.

Assessment

Structural Adequacy

The Burke Museum has a poured-concrete foundation. Exterior walls are concrete cinder blocks with a brick facing. The roof was replaced in 1984, and is described as a built-up ‘floating’ roof composed of asphalt tiles. The Burke Museum is considered structurally solid; there is no evidence of cracks in the foundation or leakage through the roof. A recent university assessment

found the museum to be one of the most earthquake-safe structures on campus. The basement, where the archaeology section is located, was re-modeled in 1991 to increase laboratory and storage spaces. All interior walls are concrete cinder blocks or poured concrete, and the entire basement floor is uncovered, poured concrete. Utilities in the Burke Museum are original to the 1962 structure and include heating, rest rooms, telephone and computer lines, and running water for processing artifacts. Some lighting and electrical panels in the gallery areas have been renovated. Collections Storage Areas 1 and 2 can be entered directly through doors off the main hallway (this hallway is also Collections Storage Area 3). Collections Storage Area 2 can also be entered through the office-laboratory. Collections Storage Areas 1 and 3 are filled to approximately 90-percent capacity, while Collections Storage Area 2 is filled to approximately 50-percent capacity. All collections in these areas are archaeological.

Environmental Controls

The only environmental control is a recycled-water heating system. No air-conditioning or humidity-control systems are present. Temperature (68–70° F) is controlled with thermostats in each room, and is regularly monitored by physical plant staff. Collections Storage Area 2, where the accession files are kept, is equipped with a humidity monitor. Humidity readings are not recorded; however, levels are generally stable at 50-percent relative humidity.

Air is filtered through a large intake system. Collections storage areas where sensitive materials are located have additional filters in their air vents. The repository manager monitors cleaning and maintenance. The university contracts “Custodial Services,” a bonded company, to clean the museum daily.

Light is provided by fluorescent tubes, which are not equipped with ultraviolet filters, in suspended fixtures. In Collections Storage Area 2, large incandescent bulbs are mounted on top of the suspended light fixtures.

Pest Management

No integrated pest-management program has been implemented. However, the anthropology

section is developing a pest-management policy that will be included in the collections-management policy. Pest-infestation problems are controlled on an as-needed basis.

Security

Security measures for the Burke Museum include intrusion alarms located on all exterior doors and some interior doors, including the two artifact collections storage rooms. Steel-framed windows, which measure 3 × 12 feet (w × h), encircle all levels of the structure that are above the basement. Windows on the ground level are equipped with an intrusion alarm. The Burke Museum has a policy to keep windows closed and locked at all times. Alarms are wired into campus security and a contracted security company. Access is controlled at museum entrances by a receptionist. Each visitor must sign in at the reception desk and wear a badge. A staff escort is required in nonpublic areas.

Archaeology collections areas have additional access controls. Only archaeology staff, two janitors, and the repository's manager have keys to the rooms. Cabinets housing collections are kept locked; only archaeology staff have keys. An archaeology staff member must be constantly present with visitors while they are in collections storage rooms. Work space for visiting researchers is provided outside the collections storage areas.

Fire Detection and Suppression

A zoned, wet-pipe sprinkler system is located throughout the repository, as are manual fire alarms. Two alarms were noted in the basement hallway. Alarms are wired into the fire department, a contracted security company, and the university. One fire extinguisher is located in Collections Storage Area 3, and another is located in the archaeology laboratory.

Artifact Storage

Approximately 7.1 ft³ of archaeological materials are stored in two separate locations. Table 19 summarizes the material classes present. Artifacts in the collections storage rooms are generally organized in descending order by state, county, site, and collection. Artifacts from sites 45SN8 (1.1 ft³) are stored within Delta Design

Table 19.
Summary, by Volume, of Material Classes
Present in Tulalip Indian Reservation
Collections at the Burke Museum

Material Class	%
Prehistoric	
Faunal remains	22
Lithics	12
Shell	22
Soil	36
¹⁴ C	1
Historical-period	
Ceramics	2
Glass	3
Metal	2
Total	100

cabinets in Collections Storage Area 1. Artifacts from sites 45SN38 and 45SN39 (6 ft³) are stored on a shelving unit and in a cabinet located in Collections Storage Area 3.

Storage Units

Storage units in Collections Storage Area 1 are Delta Design cabinets. These units have adjustable drawers, locking doors, are well sealed, contain carbon filters, and are equipped with slide-on gaskets. In addition, they are easily adjustable for maximizing the efficient use of space, and do not outgas. Cabinet labels are typed, acidic-paper cards inserted in built-in, metal label frames covered by clear plastic.

Most of the BIA collection is stored in Collections Storage Area 3 on an open, baked-enamel, metal shelving unit that measures 6.2 × 7.2 × 3 feet (w × h × d; Figure 42).

Primary Containers

Primary containers for artifacts in the Delta Design cabinets are sliding metal drawers, each measuring 1.1 ft³ (Figure 43). Each drawer is lined with a protective, polyethylene foam and labeled with an adhesive drawer number. Primary containers for artifacts stored in the hallway are folded, acidic-cardboard boxes that each measure 1.2 ft³.



Figure 42. The majority of the BIA collection at the Burke Museum is stored in acidic-paper bags inside cardboard boxes set on a metal shelf storage unit located Collections Storage Area 3.



Figure 43. A state-of-the-art Delta Design cabinet in Collections Storage Area 1 (containing artifacts from site 45SN8) is well sealed and is equipped with a carbon filter on the bottom inside portion of the door.

Secondary Containers

Secondary containers for the BIA collection primarily consist of acidic-paper bags (Table 20). Labels are written directly on the bags in pen, pencil, and/or marker or, in some cases, are typed. Label information includes site number and date, or provenience, bag number, and contents for the majority of the collection.

Laboratory Processing and Labeling

The collections have not been uniformly processed and labeled. Approximately 70 percent of the BIA collections have been washed, and approximately 80 percent have been sorted by material class. Only 10 percent of the artifacts

have been labeled, directly in ink over white correction fluid. Label information consists of catalog number.

Human Skeletal Remains

The Burke Museum is not curating any human skeletal remains recovered on Indian reservations in the project area.

Records Storage

Records are stored in Collections Storage Area 2, in a metal file box that measures 16 × 5.5 × 12 inches (w × h × d). The only type of record in the BIA collections is paper records.

Table 20.
Summary, by Volume, of Secondary
Containers Used for
Tulalip Indian Reservation Collections
at the Burke Museum

Container Type	%
Loose	8
Paper bags	79
Plastic bags	13
Total	100

Paper Records

Paper records consist of less than 0.25 inches of catalog cards for sites 45SN8, 45SN38, and 45SN39. The cards are filed in the two-drawer, metal file box. There are no secondary containers for the cards. No additional documentation (e.g., photographic records, field notes, survey records, or reports) for the BIA collections is stored at the Burke Museum.

Collections-Management Standards

Registration Procedures

Accession Files. All collections acquired since 1991 have been accessioned. However, collections acquired prior to 1991 have not always been systematically accessioned.

Location Identification. The physical location of the collections is identified in the accession records.

Cross-Indexed Files. Files are cross-indexed in a computer system by accession number, site number, and constituent.

Published Guide to Collections. A complete guide to the collections has not been published.

Site-Record Administration. A trinomial site-numbering system is utilized where applicable.

Computerized Database Management. Collections are managed by using the ARGUS database program.

Written Policies and Procedures

Minimum Standards for Acceptance. The acceptance of archaeological collections is at the

discretion of the curator. Archaeological materials must be from the region. The Burke Museum focuses on Pacific Rim archaeological materials.

Curation Policy. No formal curation policy has been produced.

Records-Management Policy. No formal records-management policies have been created.

Field-Curation Procedures. No formal field-curation guidelines are in place.

Loan Policy. Outgoing loans must be approved by the division head. For loans to be accepted loans, the materials must be approved by the museum director and executive committee.

Deaccessioning Policy. Deaccessions must be approved by the division curator, the museum director, and the museum's executive committee.

Inventory Policy. No formal inventory policy is in place.

Latest Collection Inventory. A comprehensive collections inventory has never been completed. However, a collections summary, required by NAGPRA, has been completed.

Curation Personnel

Dr. Julie Stein is a professor of anthropology at the University of Washington and curator of archaeology for the Burke Museum. Laura Phillips is a part-time collections manager.

Curation Financing

Curation activities are inadequately funded. Financing is obtained from a small, budgeted museum fund, grants, and a small endowment fund.

Access to Collections

Access to collections must be approved by the section curator. Supervision by a staff member is required.

Future Plans

Staff are revising a disaster-preparedness plan and collections-management policy, implementing an integrated, consistent pest-management program, reducing the backlog of nonaccessioned artifacts, and initiating changes recommended by a consultant hired in 1992.

Comments

1. The Burke Museum has a limited humidity-monitoring capability and no humidity controls.
2. No integrated pest-management program is in place.
3. BIA collections are stored in the hallway of the Archaeology Department. Collections storage areas are nearing full capacity.
4. Collections have not been uniformly processed and labeled.

Recommendations

1. Install an HVAC system. If this is not possible, monitor humidity with a hygrothermograph or sling psychrometer and control humidity by use of dehumidifiers.
2. Place ultraviolet filters on fluorescent lights in collections storage and documentation storage areas.
3. Implement an integrated pest-management program that includes monitoring and controlling.
4. Remove collections from the metal shelves in the hallway. Place the collections in a secure, environmentally controlled room. Provide additional space for collections storage.
5. Apply adhesive, polyethylene label holders, with acid-free paper inserts, to acid-free boxes. Labels should no longer be applied directly to the boxes. When label information or box contents changes, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

6. Rebag artifacts in 4-mil, zip-lock, polyethylene bags, and rebox in acid-free cardboard boxes. Interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

Reports Relating to Archaeological Investigations on Tulalip Indian Reservation

Bryan, A. L.

- 1955 *An Intensive Archaeological Reconnaissance in the Northern Puget Sound Region*. Unpublished Master's thesis, Department of Anthropology, University of Washington, Seattle.

Dunnell, Robert C., and John W. Fuller

- 1975 *An Archaeological Survey of Everett Harbor and the Lower Snohomish Estuary-Delta*. National Park Service.

Howard, Florence

- 1949 *An Archaeological Site Survey of Southwestern Puget Sound*. Manuscript on file, Office of Public Archaeology, University of Washington, Seattle.

Jermann, Jerry V.

- 1975 *Archaeological Resource Potential in the Tulalip Bay Area, Snohomish County, Washington*. Archaeological Associates, University of Washington. Submitted to the Tulalip Tribes.
- 1976 Letter report regarding preliminary archaeological assessment, Tulalip Indian Reservation. Institute for Environmental Studies, University of Washington, Seattle.

Yakima Indian Reservation

Washington

Collections Summary

BIA Area Office Responsibility: Portland

comply with federal regulations and modern archival-preservation standards.

Volume of Artifact Collections: 2.7 ft³

Compliance Status: All collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Human Skeletal Remains: None

Location of Collections: Washington State University, Pullman (see Chapter 9, Makah Indian Reservation)

Linear Feet of Records: < 1 linear foot (0.75 linear inches)

Compliance Status: All collections of associated records require complete rehabilitation to

Collections Identified: Sites 45YK16, 45YK28, and 45YK106

The Yakima Indian Reservation encompasses approximately 1.4-million acres of land in south-central Washington state. The reservation was established beginning with the formation of a new political entity, the Yakima Indian Nation, in the Yakima Treaty Council of 1855. The original size of the reservation was 1.2 million acres, but in 1904 and 1972 two disputed parcels were returned because of errors in the original survey, raising the total to 1.4-million acres. The Yakima Indian Nation consists of the Kittitas/Upper Yakima, Lower Yakima, Klickitat, Wanapum, Wisham, Palouse, and Wenatchi (Schuster 1994).

No major archaeological work was conducted on the Yakima Indian Reservation prior to October 31, 1979. A small collection was recovered by faculty of Washington State University, and is currently curated at the Washington

State University Museum of Anthropology. For a repository summary of Washington State University and a more-detailed description of the collections, see Chapter 9, Makah Indian Reservation.

Reports Relating to Archaeological Investigations on Yakima Indian Reservation

Weeks, Kent

1962 *Fort Simcoe Archaeological Survey Report of the 1961 Season*. University of Washington, Seattle.

Findings Summary for the Bureau of Indian Affairs

Fifteen separate storage locations at 13 repositories in five different states are known to curate BIA archaeological collections (Table 21). Each of these repositories and their satellite storage locations were visited by the assessment team. The assessment teams examined collections recovered from 13 Indian Reservations. The assessment team performed complete (100%) examinations of all known BIA collections at each location (Table 22), although the volume of collections at the Museum of the Plains Indian was estimated through a series of measurements because of time and safety constraints. A building evaluation, survey questionnaire, and collections and documentation assessments were completed for each repository. In summary, the following can be concluded.

1. Two of the 15 storage locations housing BIA collections meet the standards of 36 CFR Part 79—the Cheney Cowles Museum and the Museum of the Rockies.
2. To achieve proper care, collections must be brought together into no more than three regional repositories.
3. Thirteen repositories house BIA artifact collections. Artifact collections in eight of these require complete rehabilitation. The remaining five require partial rehabilitation.
4. Records care in only one (8%) of the 13 repositories meets the required standards for archival preservation; duplicates of the records

should be produced and stored in a separate, secure location. Associated records at five repositories are in very poor condition and require complete rehabilitation, while records at six need partial rehabilitation. Two repositories do not currently curate documentation associated with the BIA collections stored there.

5. Management controls, and a master collection inventory and database for BIA collections, are deficient to nonexistent and should be created immediately.

Infrastructure Controls

Structures housing BIA collections can be divided into three general types (Table 23). Only six of the 15 storage locations were designed or adapted to the requirements of a modern curation center (Table 24). University curation repositories use whatever space they can acquire from their governing bodies, while archaeological contracting firms, which are temporary curation repositories, are inadequately equipped to act as long-term repositories.

Two (13%) of the 15 storage locations are in compliance with the standards of 36 CFR Part 79 for the curation of archaeological collections and associated records. Eight (53%) others are in partial compliance with the major standards—proper environmental controls, pest management, security, and fire safety—included in federal regulations. Five (33%) storage locations

Table 21.
Number of Storage Locations at Repositories Housing BIA Collections

Repository	Storage Locations (n)
Alfred W. Bowers Laboratory of Anthropology, University of Idaho, Boise	1
Cheney Cowles Museum, Spokane, Washington	1
GCM Services, Butte, Montana	1
Idaho Museum of Natural History, Pocatello	1
Idaho State Historical Society, Boise	1
Museum of the Plains Indian, Browning, Montana	1
Museum of the Rockies, Bozeman, Montana	1
Oregon State Museum of Anthropology, Eugene	1
Seattle Central Community College, Seattle, Washington	1
Thomas Burke Memorial Washington State Museum, Seattle	1
University of North Dakota, Grand Forks	1
Washington State University Museum of Anthropology, Pullman	2
Western Washington University, Bellingham	2
Total	15

do not comply with any of the standards. These elements, and how well they are met, are discussed briefly and summarized below.

A final measure of the care afforded collections can be ascertained by examining the professional staff devoted to collections management. Only seven (54%) of the 13 repositories employ full-time curators for the care of archaeological collections.

Repository Maintenance

Nine of the 15 storage locations receive maintenance on a regular basis. Five (33%) are cleaned on an as-needed basis, resulting in dust-covered boxes and shelves, and in some cases, the presence of dead insects and rodent feces. Eight (53%) of the storage locations store extraneous items such as field equipment, hazardous chemicals, and personal items in collections storage areas, an unacceptable practice in professional curation facilities.

Environmental Controls

Environmental monitoring and adequate control, best provided by an HVAC system, do not take place in 10 of the 15 storage locations (see Table 24). Excluding those with HVAC systems, seven (47%) control temperature through the use of central or radiated heat, but do not adequately monitor or control humidity fluctuations or have air-conditioning. One (7%) storage location has no temperature or humidity monitoring or control systems. Two (13%) storage locations have HVAC systems but lack any means of adequate humidity monitoring or control.

Security

Eight (53%) of the storage locations meet federal standards for the safeguarding of archaeological collections (see Table 24). A primary requirement is the presence of intrusion alarms. All of the storage locations are secured with key

Table 22.
Summary of BIA Collections

Repository, by Indian Reservation	Volume of Artifacts (ft³)	Associated Records (linear inches)	Human Remains (MNI ^a)
Blackfeet			
Museum of the Plains	400.0	—	—
Colville and Spokane			
Cheney Cowles Museum	5.6	24.00	53 (fragments of burials)
Crow			
GCM Services	1.4	8.75	—
Museum of the Rockies	15.7	12.00	—
University of North Dakota	2.7	—	—
Duck Valley			
Idaho State Historical Society	0.8	0.25	—
Fort Hall			
Idaho Museum of Natural History	7.3	2.00	1 (2 teeth)
Makah			
Washington State University	—	1.25	—
Nez Perce			
Bowers Lab, University of Idaho	4.8	14.75	—
Squaxin Island			
Western Washington University	2.2	0.50	1 (2 vertebrae)
Swinomish			
Seattle Central Community College	5.5	1.00	3 (burials)
Tulalip			
Thomas Burke Museum	7.1	0.25	—
Warm Springs			
Oregon State Museum of Anthropology	2.1	4.00	—
Yakima			
Washington State University	2.7	0.75	—
Total	457.9	69.50 ^b	58

^a Minimum number of individuals

^b Approximately 5.8 linear feet.

and/or dead bolt locks, most provide for limited access, and those with windows have simple window locks. Although no documented cases of unauthorized entry were linked with the loss of BIA collections, the potential for this exists at several of the repositories examined.

Fire Detection and Suppression

One (7%) of the 15 storage locations is not equipped with fire-detection or suppression devices. Although 13 (86%) storage locations provide adequate-to-superb fire detection, only

Table 23.
Types of Repositories Curating BIA Collections

Repository Type	Number of Type	%
Museum (private, state, and university)	8	62
University lab/curation facility	4	30
Contracted firm	1	8
Total	13	100

seven (47%) have sufficient fire-detection and -suppression systems in their collections storage areas, including smoke detectors, fire alarms, fire extinguishers, and sprinkler systems. Adequate fire detection does no good without adequate fire suppression, and the reverse is also true.

Pest Management

Nine (60%) of the 15 storage locations control for pests, by spraying and trap baiting, on an as-needed basis. Six (40%) have a formal pest-management program (see Table 24)—one that monitors and controls insects and small mammals. The types of chemicals used, their frequency of use, and the attendant hazard to personnel and collections are beyond the scope of this report but should be investigated.

Artifact Curation

Thirteen repositories house BIA artifact collections (see Table 22). None of these collections has been adequately prepared for long-term curation. Most collections have not been properly cleaned, labeled, or packaged. Seven (54%) employ full-time staff for the curation of archaeological collections.

Overall, most primary containers are acidic-cardboard boxes, slightly larger than 1 ft³, with flap or telescoping lids. Many are over packed and coated with dust. Almost all boxes included some type of label, if only rudimentary.

Most (45% by volume) of the collections are stored loose, without secondary containers. Forty-one percent (by volume) of the collections

are stored in paper bags that serve as secondary containers. Only 4 percent of the secondary containers observed were archival, polyethylene, zip-lock bags. Most secondary containers were labeled directly, although adhesive labels were also noted. The scarcity of secondary containers and the wide variety of nonarchival secondary containers will contribute to the deterioration of the collections (Table 25).

Data also were collected regarding the major prehistoric and historical-period material classes observed in each of the BIA collections (Table 26). Lithics and faunal remains are most abundant in prehistoric collections. Historical-period materials include ceramics, glass, and metal, but comprise very small portions of the total BIA collections.

Human Skeletal Remains

Human skeletal remains and associated funerary objects comprise 2 percent, by volume, of the prehistoric material classes (see Table 26). A minimum number of 58 individuals (based on elements present) are included in the BIA collections. The Cheney Cowles Museum houses a minimum of 53 individuals in four boxes. The remains are very fragmented, and possible associated funerary objects are stored with them. Respecting the request of the Colville and Spokane Indian Tribes, St. Louis District personnel did not directly inspect the remains and associated funerary objects. Three other repositories also curate human skeletal remains, including one individual at the Idaho Museum of Natural History (two teeth), three burials at Seattle Central Community College, and one individual at Western Washington University (two vertebrae).

Table 24.
Presence or Absence of Infrastructure Controls at Repositories Housing BIA Collections

Repository	Fire Safety	Security	Environmental Controls	HVAC	Pest Management	36 CFR Part 79 Standards
Burke Museum	x	x			as needed ^a	
Cheney Cowles Museum	x ^b	x	x	x	x	x
GCM Services					as needed ^a	
Idaho Museum of Natural History	x		x	x	as needed ^a	
Idaho State Historical Society	x	x			as needed ^a	
Museum of the Plains Indian		x		x ^c	as needed ^a	
Museum of the Rockies	x	x	x	x	x	x
Oregon State Museum of Anthropology		x	x	x	x	
Seattle Central Community College	x	x	x	x	as needed ^a	
University of Idaho Laboratory	x				x	
University of North Dakota					as needed ^a	
Washington State University						
Storage Location 1		x		x ^c	x	
Storage Location 2					x	
Western Washington University						
Storage Location 1					as needed ^a	
Storage Location 2					as needed ^a	

^aThese repositories do not have an integrated pest-management program, but do control pests on an as-needed basis.

^bThis repository, in addition to a sprinkler system, has a halon fire-suppression system, which is advantageous for the protection of some types of collections but hazardous to humans.

^cThe HVAC systems at these repositories do not monitor and control humidity.

Table 25.
Summary, by Volume, of Secondary Containers Used for BIA Collections

Container Type	%
Acidic-paper bags	41
Archival, plastic, zip-lock bags	4
Loose	45
Small, acidic-cardboard boxes	4
Pillowcases	3
Other	3
Total	100

Complete rehabilitation (e.g., reboxing, rebagging, and labeling) should be carried out in order to stabilize the remains, and a complete inventory needs to be generated in order to comply with the requirements of NAGPRA.

Records Management

Records associated with archaeological work conducted on Indian reservations total 5.8 linear feet (69.5 linear inches) and include paper, photographic, maps, and draft report records (see Table 22).

Archival protocols were observed at only one (8%) repository. In many cases, paper records have not been housed in acid-free folders, photographs have not been isolated and stored in chemically inert sleeves, and large-scale maps have not been stored flat in map drawers. In few instances were collections accompanied by a complete set of associated documentation. Much documentation appears to have been misplaced over the years or not curated with the artifacts after fieldwork was completed.

Environmental controls for temperature and humidity that meet the federal standards in 36 CFR Part 79 are in place at only five (33%) of the 15 storage locations. Although not a major problem yet, records housed in the remaining 10 storage locations are subject to temperature and humidity fluctuations. Archive materials readily absorb and release moisture, leading to expansion and contraction, dimensional changes

Table 26.
Summary, by Volume, of Material Classes Present in BIA Collections

Material Class	%
Prehistoric	
Lithics	19
Human remains and associated funerary objects ^a	2
Faunal remains	75
Soil	2
Other ^b	1
Historical-period artifacts ^c	1
Total	100

^aMost (53 individuals) human skeletal remains were possibly mixed with associated funerary objects at the Cheney Cowles Museum. Respecting requests by the Colville and Spokane Tribes, St. Louis District personnel did not physically inspect these remains.

^b“Other” consists of ¹⁴C, botanicals, worked faunal remains and shell, ochre, beads, wood, and mixed/indeterminate materials.

^cHistorical-period artifacts consist of ceramics, glass, metal, and plastic.

that accelerate deterioration and promote major visible damage such as cockling paper, flaking ink, warped covers on books, and cracked emulsion on photographs.

Collections-Management Standards

Basic collections-management tools—e.g., policy and procedure statements for artifact curation, inventories, records management, and deaccessioning—are present at four repositories, are partially present at five repositories, and do not exist in any form at four. Therefore, most of the examined repositories entrusted with the care of the nation’s heritage have no long-term plan for the management of these resources. This responsibility must be honored by federal resource managers as well, and must be corrected immediately. Failure to meet elementary

curation needs and responsibilities has led to the substandard care of many of the BIA archaeological collections.

Prior to this collections assessment, the BIA did not know the extent, location, or condition of its archaeological collections. BIA personnel should be commended for recognizing this problem and addressing it, but now that specific deficiencies have been identified, action must be taken to protect the collections. At minimum, a plan of action for the long-term management of BIA collections should implement the following four items.

1. Inventory all human skeletal remains to comply with NAGPRA.

2. Establish a priority for rehabilitation of the collections.

3. Inventory and rehabilitate the collections and associated documentation.

4. Develop an archives-management plan.

Implementation of these minimal tasks will contribute greatly to the preservation of data essential to our understanding of the culture history of North America.

Recommendations

The following general recommendations are submitted for bringing the evaluated BIA collections into compliance with the mandates of 36 CFR Part 79 and NAGPRA. To ensure maximum savings in cost to the BIA, compliance with 36 CFR Part 79 and NAGPRA should be undertaken together. A comprehensive plan for curation compliance includes the following points.

Develop a Plan of Action

A plan of action minimally must address four points—(1) long term housing of the collections and records, (2) rehabilitation of the artifact collections, (3) rehabilitation of the associated records, and (4) management of these data.

Develop a Formal Archives-Management Program

A plan of action must immediately be developed to establish archives-deficiency priorities within the BIA. Following this survey, all records should be brought together and rehabilitated to comply with federal guidelines and modern archival-preservation standards. Archives rehabilitation should precede collections rehabilitation, because the documentation that the assessment team was able to locate is in the most immediate danger. Rehabilitation costs for the associated

documentation (69.5 linear inches) is factored into the cost estimate for the rehabilitation of artifact collections described in the following section. Appropriate cost-of-storage furniture is subsumed under the equipment estimate described below. Archives rehabilitation includes the following nine steps.

1. Inventory and catalog all associated records to standards consistent with those of a professional museum.
2. Using an appropriate professional staff, assess the condition of all records, and implement a long-term conservation program for appropriate records.
3. Conserve significant records that are currently at risk.
4. Transfer general records into acid-free folders and appropriate archival storage units.
5. Place photographs, negatives, and slides into archival, polyethylene sleeves, acid-free envelopes, and appropriate storage units.
6. Catalog and curate large-scale maps in metal map cases.
7. Produce duplicate or back-up copies of associated records that will be stored in a separate location.
8. Develop an archives inventory-management program that uses microcomputer technology.

9. Create finding aids for each collection, and create a master, cross-indexed finding aid to be housed at the BIA.

Inventory and Rehabilitate Existing Artifact Collections

A priority based on physical condition must be assigned to BIA collections, a general inventory must be produced, and the collections must be rehabilitated to professional museum standards. Rehabilitation must include the following four steps.

1. Inventory and catalog all artifact collections in a manner consistent with professional museum standards.
2. Label and package artifacts consistently and in accordance with archival standards, and place them in archivally stable containers.
3. Using an appropriate professional staff, assess the condition of all perishable artifacts, and implement a long-term conservation program for the appropriate materials.
4. Develop a collections manual to aid in the management of archaeological collections.

These steps will result in the stabilization and preservation of collections, and will insure management of the collections in the most cost-efficient manner for the federal taxpayer. Proper management of these collections will insure that scholars, students, and the public have access to, and benefit from, the BIA archaeological collections, which presently do not approach their potential for use. Cost for rehabilitation to the 458 ft³ of BIA archaeological materials and 69.5 linear inches of associated documentation is approximately \$165,240. Contingent upon BIA curation decisions, an additional \$500,000 may be required for equipment needs associated with the collections.

Comply with NAGPRA

NAGPRA compliance includes an examination of the BIA collections for human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony. It is not possible to provide a cost estimate for the task at this time; however, when a general survey of NAGPRA-related issues is completed, a realistic cost estimate can be produced. To satisfy the requirements of NAGPRA, the following tasks must be performed at the two known repositories holding BIA collections that include relevant materials.

1. Conduct a records search of the collections to identify the accession and catalog numbers and the location of human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
2. Perform a physical inspection of storage containers to identify human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
3. Conduct analyses of human skeletal remains that include
 - a. a detailed skeletal inventory listing elements present, their completeness and condition;
 - b. measurements of long bones and crania sufficient to provide basic description of physical characteristics, stature, and morphology of the remains;
 - c. estimates of age and gender; and
 - d. observations of any pathological conditions, cultural modifications, and evidence of life activities and trauma that might provide evidence of cultural affiliation of the remains or the context from which they were recovered.
4. Produce summary and inventory reports for each repository, which must be provided in order to comply with NAGPRA.
 - a. The summary (from the National Park Service's NAGPRA guidelines) should include the following information:

- information concerning unassociated funerary objects, sacred objects, and objects of cultural patrimony;
- an estimate of the number of objects in the collection;
- a description of the kinds of objects in the collection with, where readily ascertainable, reference to the means and dates of acquisition and locations from which the collections came;
- if available, information relevant to identifying lineal descendants and cultural affiliation.

b. The inventory (from the National Park Service's NAGPRA guidelines) should contain the following information:

- information concerning human skeletal remains and associated funerary objects;
- an item-by-item list of all human skeletal remains and associated funerary objects that are identified as being culturally affiliated with one or more present-day Native American tribes;
- a list of all human skeletal remains and associated objects for which no present-day Native American tribal affiliation can be determined;
- accession and catalog entries of the human skeletal remains with which funerary objects were associated;
- if known, information related to the acquisition of each object, including the name of the person and/or organization for whom the object was acquired, the means of acquisition, and the antiquity of the human remains and associated funerary objects; and
- a description of each set of funerary remains and associated funerary objects, including dimensions, materials, and photographic documentation.

Bring Together Collections

A plan of action for the long-term care of collections and associated records must be adopted by the BIA. In this era of cost-effectiveness, the St. Louis District recommends bringing together collections at one regionally based, federally owned or leased repository constructed

specifically for the curation and long-term management of archaeological collections. Another, less cost-efficient, option is to place the collections in existing repositories in their state of origin, or bring together collections at one regionally based existing repository, then spend the requisite funds to upgrade these repositories to meet federal curation standards and the regional differences in collections and management needs.

If the BIA chooses to bring together collections into one already existing repository, information from this assessment should prove useful. Currently, only the Cheney Cowles Museum and the Museum of the Rockies meet all federal guidelines mandated by 36 CFR Part 79.

Develop Cooperative Agreements

To defray costs, the BIA is encouraged to develop cooperative agreements with other agencies to share costs of capital improvements and collections rehabilitation. Cooperative agreements provide opportunities for joint ventures between and among federal agencies with similar curation requirements. The St. Louis District has long-term experience in this area and, if needed, could assist the BIA.

Dedicate Space for Collections Storage

Following the adoption of a curation strategy, the BIA must develop a plan of action that identifies how their curation repository will function. Space must be dedicated for the curation of archaeological collections and associated records. Office, research, and work areas must be separate from collections storage areas. Space that is used both as storage and work areas is unacceptable. Minimal curation standards must include the following five points.

1. Storage space should be adequate environmentally to maintain stable temperature and

humidity levels, in addition to maintaining environmental requirements for the types of objects being curated within.

2. Storage space should minimize the number of exterior walls, windows, and doors in order to
 - a. decrease the chance of condensation on walls and windows during seasonal temperature changes,
 - b. enhance security, and
 - c. increase energy efficiency.

3. Water lines associated with fire-suppression systems are the only kind of overhead pipes allowed in collections storage areas. Water and sewer pipes should be removed.

4. Electrical junction boxes and gas and electric meters should be outside collections storage areas, in order to limit access by noncuratorial staff.

5. Storage areas should be large enough to accommodate existing collections as well as projected growth needs.

Security, Fire Detection and Suppression, and Maintenance of Collections Storage Area

A plan of action for any archaeological curation repository must include measures for security, fire detection and suppression, and maintenance of the collections storage area that minimally incorporate the following.

Security

Entrances to the collections storage area should have metal or solid-core, wooden doors. Doors should have dead bolt and key locks, and the storage area should be equipped with an electronic intrusion-detection system. Keys to the storage area must be restricted to repository staff. All cabinets housing archaeological collections

should be kept locked, except for when items are being removed for research. Researchers and visitors should not be allowed access to the collections storage area unless accompanied by curatorial staff. When researchers or visitors request to work with objects, it is best that the objects be taken to an area separate from, and outside, the collections storage area.

Fire Detection and Suppression

Fire-detection and -suppression systems must be installed to safeguard collections and staff. Smoke detectors must be placed in all parts of the collections storage area. The appropriate types and number of fire extinguishers, in relation to the types of collections and the overall size of the collections storage area, must be properly maintained and placed in clearly marked positions within the collections storage area. Sprinkler systems should be installed throughout the repository, including the collections storage area.

Maintenance of Repository

A scheduled plan for maintenance must be established for the collections storage area. Maintenance activities should include routine sweeping, mopping, and dusting by curatorial staff or a contracted janitorial service. In addition, an integrated pest-management program should be implemented, including regular monitoring for, and controlling of, pest infestations. Smoking, eating, and drinking must be forbidden in the collections storage area.

Full-Time Manager for Archaeological Collections

It is imperative that a full-time collections manager, with professional qualifications and prior experience in collections management, be hired to care for the archaeological collections. Collections managers are minimally responsible for the following tasks.

1. Ensure that adequate written policies and procedures are in place and are shared so that staff have appropriate guidance.
2. Ensure that management records are kept up-to-date, complete, properly monitored, and readily available to researchers.
3. Manage a computerized database.
4. Ensure that artifacts can be located easily.
5. Ensure that objects are properly labeled.
6. Ensure that artifacts and records are maintained under physically secure conditions, whether in storage, on exhibit, or under study.

7. Perform periodic inventories and inspections of collections and records to ensure their long-term survival.

The St. Louis District regards the aforementioned recommendations as minimal tasks that must be addressed in order to bring BIA collections into compliance with federal standards for archaeological curation.

The BIA has been entrusted with important collections of prehistoric and historical-period artifacts. Its trust lands today occupy areas of great importance in the history of this country. Americans trust that their national heritage will be preserved for future generations. Our knowledge of Native American prehistory, American history, and of Euroamerican-Native American interactions can only benefit from increased public access to BIA archaeological collections.

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APPENDIX

Annotated Bibliography for Project Area Indian Reservations for Which No Archaeological Collections Were Identified

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